

# JVC

## SERVICE MANUAL

WIDE LCD PANEL TELEVISION

**LT-32C31BJE, LT-32C31BUE,  
LT-32C31SJE, LT-32C31SUE**

BASIC CHASSIS

MK



InterArt  
**D.I.S.T.**  
Digital Image Scaling Technology  
**T-V LINK**

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# SPECIFICATION

Items		Contents
Dimensions (W × H × D)		83.3 cm × 63.8 cm × 26.0 cm (Included stand) 83.3 cm × 56.9 cm × 9.7 cm (TV only)
Mass		22.0 kg (Included stand) 19.2 kg (TV only)
TV RF System		CCIR B/G, I, D/K, L
Colour System		PAL / SECAM / NTSC 3.58 / NTSC 4.43 (NTSC:EXT only).
Stereo System		A2 (B/G, D/K), NICAM (B/G, I, D/K, L)
Teletext System		FLOF (Fastext), TOP, WST (World Standard System)
Receiving Frequency	VHF UHF CATV	47MHz ~ 470MHz 470MHz ~ 862MHz 116MHz ~ 172MHz / 220MHz ~ 469MHz
Intermediate Frequency	VIF SIF	38.9MHz(B/G, D/K, I) 33.4MHz(5.5MHz:B/G) / 32.9MHz(6.0MHz:I) / 32.4MHz(6.5MHz:L,D/K)
Colour Sub Carrier Frequency	PAL SECAM NTSC	4.43MHz 4.40625MHz / 4.25MHz 3.58MHz / 4.43MHz
Power Input		AC110 - AC240 V, 50 Hz / 60 Hz
Power Consumption		177 W, [Standby: 2.3 W]
Aerial Input		75 Ω unbalanced, coaxial
Screen Size		Diagonal : 80.2cm (H:41.2cm × V : 68.7cm)
Display Resolution		Horizontal : 1280 dots × Vertical : 768 dots (W-XGA)
Speaker		6.6 cm round × 2 (Oblique corn)
Audio Power Output		10 W + 10 W (Rated power output)
EXT-1 (Input/Output)		21 pin Euro connector (SCART socket) Video input, Audio L/R inputs and RGB inputs are available. TV broadcast outputs (Video and Audio L/R) are available.
EXT-2 (Input/Output)		21 pin Euro connector (SCART socket) Video input, S-VIDEO (Y/C) input, Audio L/R inputs and RGB inputs are available. Video and Audio L/R outputs are available. T-V LINK functions are available.
EXT-3 (Input)	S-Video  Video Audio	Mini-DIN 4 pin × 1 Y: 1V (p-p), Positive (Negative sync provided), 75 Ω C: 0.286V (p-p) (Burst signal), 75 Ω 1V (p-p), Positive (Negative sync provided), 75 Ω, RCA pin jack × 1 500mV (rms), High impedance, RCA pin jack × 2
EXT-4 (Input)	Component video   Audio (L/R)	RCA pin jack × 3 Y : 1V(p-p), 75 Ω Pb / B-Y: 0.7V(p-p), 75 Ω Pr / R-Y : 0.7V(p-p), 75 Ω Component video (Pr, Pb, Y) inputs (625p, 525p, 1125i) and Audio L/R inputs are available. 525p and 625p are progressive scanning signals. Some DVD players can output these signals. 1125i is one of the new high-definition signals. 500mV(rms) (-4dBs), High impedance, RCA pin jack × 2
AUDIO OUT terminal		500mV(rms), Low impedance, RCA pin jack × 2
Headphone jack		3.5 mm stereo mini jack × 1
Remote Control Unit		RM-C1808 (AA/R6 dry cell battery × 2)

Design and specifications subject to change without notice.

# SECTION 1

## PRECAUTION

### 1.1 SAFETY PRECAUTIONS [EXCEPT FOR UK]

- (1) The design of this product contains special hardware, many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- (2) Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
- (3) Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (  $\Delta$  ) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
- (4) **Don't short between the LIVE side ground and ISOLATED (NEUTRAL) side ground or EARTH side ground when repairing.**  
Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (  $\perp$  ) side GND, the ISOLATED (NEUTRAL) : (  $\equiv$  ) side GND and EARTH : (  $\oplus$  ) side GND.  
Don't short between the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND and never measure the LIVE side GND and ISOLATED (NEUTRAL) side GND or EARTH side GND at the same time with a measuring apparatus (oscilloscope etc.). If above note will not be kept, a fuse or any parts will be broken.
- (5) If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See B1 POWER SUPPLY check).
- (6) The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
- (7) Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10k $\Omega$  2W resistor to the anode button.

- (8) When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.

- (9) **Isolation Check (Safety for Electrical Shock Hazard)**  
After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screw heads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

#### a) Dielectric Strength Test

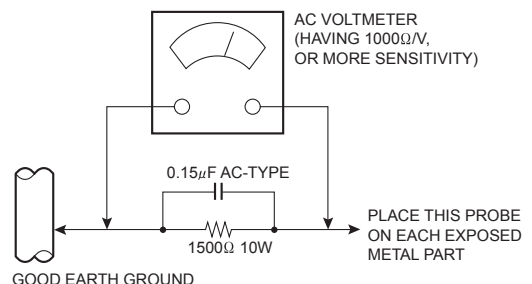
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second. ( . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.) This method of test requires a test equipment not generally found in the service trade.

#### b) Leakage Current Check


Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.). However, in tropical area, this must not exceed 0.2mA AC (r.m.s.).

#### Alternate Check Method

Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 $\Omega$  per volt or more sensitivity in the following manner. Connect a 1500 $\Omega$  10W resistor paralleled by a 0.15 $\mu$ F AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.). However, in tropical area, this must not exceed 0.3V AC (r.m.s.). This corresponds to 0.2mA AC (r.m.s.).



## 1.2 SAFETY PRECAUTIONS [FOR UK]

- (1) The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
- (2) Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
- (3) Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessary be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (  ) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may cause shock, fire, or other hazards.
- (4) The leads in the products are routed and dressed with ties, clamps, tubing's, barriers and the like to be separated from live parts, high temperature parts, moving parts and / or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.

### WARNING

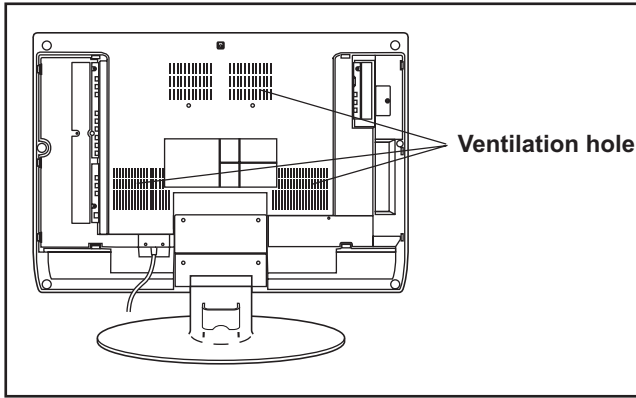
- (1) The equipment has been designed and manufactured to meet international safety standards.
- (2) It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
- (3) Repairs must be made in accordance with the relevant safety standards.
- (4) It is essential that safety critical components are replaced by approved parts.
- (5) If mains voltage selector is provided, check setting for local voltage.



## 1.3 INSTALLATION

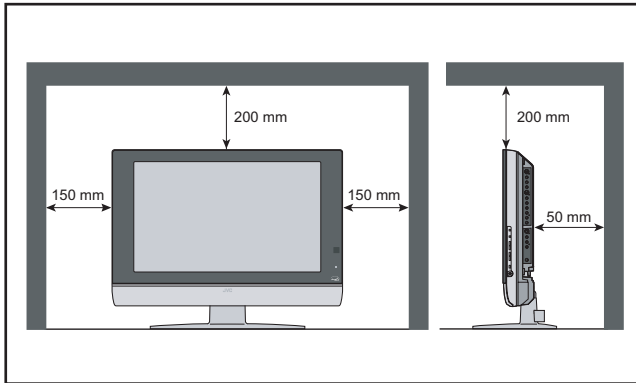
### 1.3.1 HEAT DISSIPATION

If the heat dissipation vent behind this unit is blocked, cooling efficiency may deteriorate and temperature inside the unit will rise. The temperature sensor that protects the unit will be activated when internal temperature exceeds the pre-determined level and power will be turned off automatically. Therefore, please make sure pay attention not to block the heat dissipation vent as well as the ventilation outlet behind the unit and ensure that there is room for ventilation around it.



### 1.3.2 INSTALLATION REQUIREMENTS

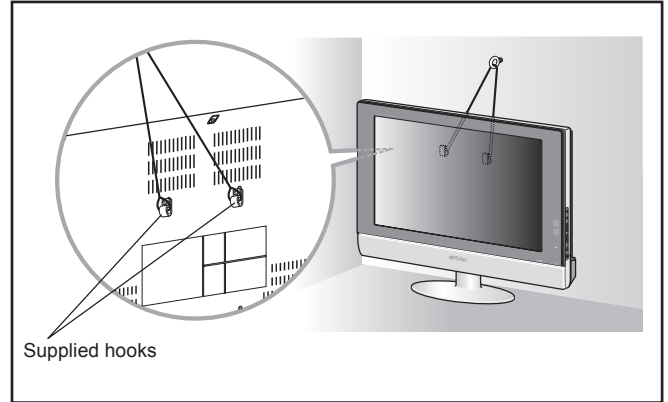
Ensure that the minimal distance is maintained, as specified below, between the unit with and the surrounding walls, as well as the floor etc. Install the unit on stable flooring or stands. Take precautionary measures to prevent the unit from tipping in order to protect against accidents and earthquakes.



### 1.3.3 INSTALLATION REQUIREMENTS

To ensure safety in an emergency such as an earthquake, and to prevent accidents, ensure that measures are taken to prevent the TV dropping or falling over.

Use the supplied screws to firmly attach the supplied hooks to the back of the TV, and use commercially available cord to fix the TV to rigid components such as walls and columns.



### 1.3.4 NOTES ON HANDLING

#### (1) WHEN TAKING UNIT OUT OF A PACKING CASE

When taking the unit out of a packing case, do not grasp the upper part of the unit. If you take the unit out while grasping the upper part, the LCD PANEL may be damaged because of a pressure. Instead of grasping the upper part, put your hands on the lower backside or sides of the unit.

#### (2) AS FOR PRESSING OR TOUCHING A SPEAKER

Be careful not to press the opening of the speaker in the lower part of the unit and around them since the decorative sheet on the surface of the openings may be deformed.

## 1.4 HANDLING LCD PANEL

### 1.4.1 PRECAUTIONS FOR TRANSPORTATION

When transporting the unit, pressure exerted on the internal LCD panel due to improper handling (such as tossing and dropping) may cause damages even when the unit is carefully packed. To prevent accidents from occurring during transportation, pay careful attention before delivery, such as through explaining the handling instructions to transporters.

Ensure that the following requirements are met during transportation, as the LCD panel of this unit is made of glass and therefore fragile:

- (1) **USE A SPECIAL PACKING CASE FOR THE LCD PANEL**  
When transporting the LCD panel of the unit, use a special packing case (packing materials). A special packing case is used when a LCD panel is supplied as a service spare part.

- (2) **ATTACH PROTECTION SHEET TO THE FRONT**  
Since the front (display part) of the panel is vulnerable, attach the protection sheet to the front of the LCD panel before transportation. Protection sheet is used when a LCD panel is supplied as a service spare part.

- (3) **AVOID VIBRATIONS AND IMPACTS**  
The unit may be broken if it is toppled sideways even when properly packed. Continuous vibration may shift the gap of the panel, and the unit may not be able to display images properly. Ensure that the unit is carried by at least 2 persons and pay careful attention not to exert any vibration or impact on it.

- (4) **DO NOT PLACE EQUIPMENT HORIZONTALLY**  
Ensure that it is placed upright and not horizontally during transportation and storage as the LCD panel is very vulnerable to lateral impacts and may break. During transportation, ensure that the unit is loaded along the traveling direction of the vehicle, and avoid stacking them on one another. For storage, ensure that they are stacked in 2 layers or less even when placed upright.

### 1.4.2 OPTICAL FILTER (ON THE FRONT OF THE LCD PANEL)


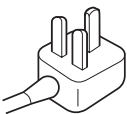

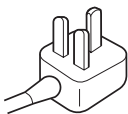
- (1) Avoid placing the unit under direct sunlight over a prolonged period of time. This may cause the optical filter to deteriorate in quality and color.
- (2) Clean the filter surface by wiping it softly and lightly with a soft and lightly fuzz cloth (such as outing flannel).
- (3) Do not use solvents such as benzene or thinner to wipe the filter surface. This may cause the filter to deteriorate in quality or the coating on the surface to come off. When cleaning the filter, usually use the neutral detergent diluted with water. When cleaning the dirty filter, use water-diluted ethanol.
- (4) Since the filter surface is fragile, do not scratch or hit it with hard materials. Be careful enough not to touch the front surface, especially when taking the unit out of the packing case or during transportation.

### 1.4.3 PRECAUTIONS FOR REPLACEMENT OF EXTERIOR PARTS

Take note of the following when replacing exterior parts (REAR COVER, FRONT PANEL, etc.):

- (1) Do not exert pressure on the front of the LCD panel (filter surface). It may cause irregular color.
- (2) Pay careful attention not to scratch or stain the front of the LCD panel (filter surface) with hands.
- (3) When replacing exterior parts, the front (LCD panel) should be placed facing downward. Place a mat, etc. underneath to avoid causing scratches to the front (filter surface).

## 1.5 MAIN DIFFERENCE LIST

⚠	Items	LT-32C31BUE	LT-32C31BJE	LT-32C31SUE	LT-32C31SJE
⚠	FRONT PANEL COLOUR	BLACK	←	SILVER	←
⚠	POWER CORD	QMPK300-170-JC 	QMPN250-170-JC 	QMPK300-170-JC 	QMPN250-170-JC 

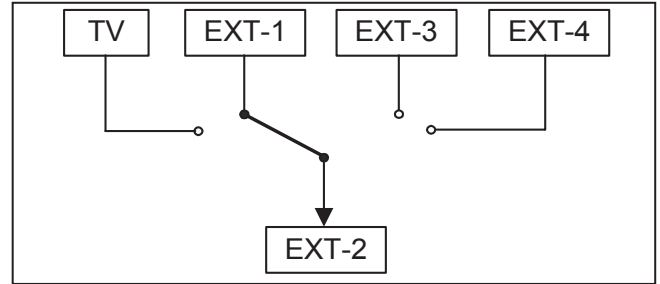
## SECTION 2

### SPECIFIC SERVICE INSTRUCTIONS

#### 2.1 FEATURES

##### 2.1.1 FUNCTION / CIRCUITS

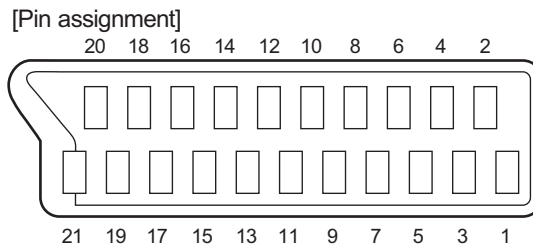
- DIST (Digital Image Scaling Technology) employs an interpolation method that doubles the scanning lines to realize 1250-line flicker-free picture making it especially suitable for reproducing high-resolution pictures even on large-screen displays.
- New chassis design enable use of an interactive on screen control.
- The TELETEXT SYSTEM has a built-in FASTEXT (UK system), TOP (German system) and WST (world standard system) system.
- Because this TV unit corresponds to multiplex broadcast, users can enjoy music programs and sporting events with live realism. In addition, BILINGUAL programs can be heard in their original language.
- Users can make VCR dubbing of picture and sound by controlling the AV selector to select an optional source at the EXT-2 output shown in figure.



##### 2.1.2 21-PIN EURO CONNECTOR (SCART) : EXT-1/EXT-2

Pin No.	Signal designation	Matching value	EXT-1	EXT-2
1	AUDIO R output	500mV(rms) (Nominal), Low impedance	Used (TV OUT)	Used (LINE OUT)
2	AUDIO R input	500mV(rms) (Nominal), High impedance	Used (R1)	Used (R2)
3	AUDIO L output	500mV(rms) (Nominal), Low impedance	Used (TV OUT)	Used (LINE OUT)
4	AUDIO GND		Used	Used
5	GND (B)		Used	Used
6	AUDIO L input	500mV(rms) (Nominal), High impedance	Used (L1)	Used (L2)
7	B input	700mV <sub>(B-W)</sub> , 75Ω	Used	Used
8	FUNCTION SW (SLOW SW)	Low : 0V-3V High : 8V-12V, High impedance	Used	Used
9	GND (G)		Used	Used
10	SCL / T-V LINK		Not used	Used (SCL2 / TV-LINK)
11	G input	700mV <sub>(B-W)</sub> , 75Ω	Used	Used
12	SDA		Not used	Used (SDA2)
13	GND (R)		Used	Used
14	GND (YS)		Used	Not used
15	R / C input	R : 700mV <sub>(B-W)</sub> , 75Ω C : 300mV <sub>(P-P)</sub> , 75Ω	Used (R)	Used (C2/R)
16	Ys input (FAST SW)	Low : 0V-0.4V, High : 1V-3V, 75Ω	Used	Used
17	GND (VIDEO output)		Used	Used
18	GND (VIDEO input)		Used	Used
19	VIDEO output	1V <sub>(P-P)</sub> (Negative sync), 75Ω	Used (TV OUT)	Used (LINE OUT)
20	VIDEO / Y input	1V <sub>(P-P)</sub> (Negative sync), 75Ω	Used	Used
21	COMMON GND		Used	Used

(P-P= Peak to Peak, B-W= Blanking to white peak)



## 2.2 TECHNICAL INFORMATION

### 2.2.1 LCD PANEL

This unit uses the flat type panel LCD (Liquid Crystal Display) panel that occupies as little space as possible, instead of the conventional CRT (Cathode Ray Tube), as a display unit.

Since the unit has the two polarizing filter that are at right angles to each other, the unit adopts "normally black" mode, where light does not pass through the polarizing filter and the screen is black when no voltage is applied to the liquid crystals.

#### 2.2.1.1 SPECIFICATIONS

The following table shows the specifications of this unit.

Item	Specifications	Remarks
Maximum dimensions ( W × H × D )	76.4cm × 46.5cm × 3.8cm	
Weight	8.0kg	
Effective screen size	Diagonal : 80.2cm (H:41.2cm × V : 68.7cm)	32V type
Aspect ratio	15:9	
Drive device/ system	a-Si-TFT, active matrix system	
Resolution	Horizontally 1280 × Vertically 768 × RGB <W-XGA>	2949120 dots in total
Pixel pitch (pixel size)	Horizontally:0.4425mm, Vertically:0.4425mm	
Displayed color	16777216 colors	256 colors for R, G, and B
Brightness	470cd/m <sup>2</sup>	
Contrast ratio	500:1	
Response time	13ms	
View angle	Vertically 170°, horizontally 170°	
Surface Polarizer	Anti-Glare type	
Color Filter	Vertical stripe	
Backlight	Cold cathode fluorescent lamp × 16	
Power Supply Voltage in LCD	12V	
Power Supply Voltage in Backlight	1290V (rms)	

#### 2.2.1.2 PIXEL FAULT

There are three pixel faults - bright fault , dark fault and flicker fault - that are respectively defined as follows.

##### (1) BRIGHT FAULT

In this pixel fault, a cell that should not light originally is lighting on and off.

For checking this pixel fault, input ALL BLACK SCREEN and find out the cell that is lighting on and off.

##### (2) DARK FAULT

In this pixel fault, a cell that should light originally is not lighting or lighting with the brightness twice as brighter as originally lighting.

For checking this pixel fault, input 100% of each R/G/B colour and find out the cell that is not lighting.

##### (3) FLICKER FAULT

In the pixel fault, a cell that should light originally or not light originally is flashing on and off.

For checking this pixel fault, input ALL BLACK SCREEN signal or 100% of each RGB colour and find out the cell that is flashing on and off.

## 2.2.2 MAIN CPU PIN FUNCTION (IC001)

Pin No.	Pin Name	I/O	Remark
1	TCK	I	Test purpose
2	TMS	I	Test purpose
3	TDI	I	Test purpose
4	TDO	O	Test purpose
5	P2.8	I	Remote control input
6	P2.9	I	Mechanical power switch detection [Pushing:L]
7	P2.10	I	IP error detection [Detection:L]
8	P2.11	O	IP reset
9	P2.12	I	TV-LINK communication
10	P2.13	I	Power ON/OFF [ON:L]
11	P2.14	I	Low B protect detection [Detection:L]
12	P2.15	I	Power condition check [ON:L]
13	VSS33	I	GND
14	VDD33	I	3.3V
15	P4.5	O	TV-LINK communication
16	A20	O	Memory (Program ROM) address
17	A19	O	Memory (Program ROM) address
18	A18	O	Memory (Program ROM) address
19	A17	O	Memory (Program ROM) address
20	VSS25	I	GND
21	VDD25	I	2.5V
22	A16	O	Memory (Program ROM) address
23	A8	O	Memory (Program ROM) address
24	A7	O	Memory (Program ROM) address
25	A9	O	Memory (Program ROM) address
26	A6	O	Memory (Program ROM) address
27	A5	O	Memory (Program ROM) address
28	A10	O	Memory (Program ROM) address
29	A11	O	Memory (Program ROM) address
30	A12	O	Memory (Program ROM) address
31	VSS33	I	GND
32	VDD33	I	3.3V
33	A4	O	Memory (Program ROM) address
34	A3	O	Memory (Program ROM) address
35	A2	O	Memory (Program ROM) address
36	A1	O	Memory (Program ROM) address
37	A0	O	Memory (Program ROM) address
38	A13	O	Memory (Program ROM) address
39	RAS/A14	O	Memory (Program ROM) address
40	CAS/A15	O	Memory (Program ROM) address
41	VSS33	I	GND
42	VDD33	I	3.3V
43	MEMCLK	O	Clock for memory
44	CSSDRAM	O	Chip select for memory
45	CLKEN	O	Clock enable for memory
46	CSROM	O	Chip select for memory
47	RD	O	Read for memory
48	UDQM	O	Control IN/OUT buffer of Memory (IC003)
49	LDQM	O	Control IN/OUT buffer of Memory (IC003)
50	WR	O	Write for memory
51	D15	I/O	Data (Program ROM)
52	VSS33	I	GND
53	VDD33	I	3.3V
54	D7	I/O	Data (Program ROM)
55	D0	I/O	Data (Program ROM)
56	D14	I/O	Data (Program ROM)
57	D8	I/O	Data (Program ROM)
58	D6	I/O	Data (Program ROM)
59	D1	I/O	Data (Program ROM)
60	VSS33	I	GND
61	VDD33	I	3.3V
62	D13	I/O	Data (Program ROM)
63	D9	I/O	Data (Program ROM)
64	D5	I/O	Data (Program ROM)

Pin No.	Pin Name	I/O	Remark
65	D2	I/O	Data (Program ROM)
66	D12	I/O	Data (Program ROM)
67	D10	I/O	Data (Program ROM)
68	VSS33	I	GND
69	VDD33	I	3.3V
70	D4	I/O	Data (Program ROM)
71	D3	I/O	Data (Program ROM)
72	D11	I/O	Data (Program ROM)
73	RSTIN	I	Reset
74	P3.0	O	I <sup>2</sup> C CLOCK 0 (for memory)
75	P3.1	I/O	I <sup>2</sup> C DATA 0 (for memory)
76	P3.2	I	Remote control input
77	P3.3	I	Clock for OSD
78	P3.4	O	Tuner system switch
79	P3.5	O	Tuner system switch
80	P3.6	I	Teletext mode:H
81	P3.7	I	Power START
82	P3.8	I	Not used
83	P3.9	I	Picture mute
84	VSS33	I	GND
85	VDD33	I	3.3V
86	VSS25	I	GND
87	VDD25	I	2.5V
88	TXD0	O	Sub micro computer communication
89	RXD0	I	Sub micro computer communication
90	P3.12	I	Not used
91	P3.13	I/O	Not used
92	P3.15	I/O	Not used
93	P5.14(YS2)	I	Ys for EXT-2
94	P5.15	I	Headphone detection [Detection:L]
95	TRIG_IN	I/O	Not used
96	TRIG_OUT	I/O	Not used
97	P6.2	I	Not used
98	P6.3	O	I <sup>2</sup> C bus clock for IC control
99	P6.4	I/O	I <sup>2</sup> C bus data for IC control
100	P6.5	O	Multi-sound process reset
101	P6.6	I/O	I <sup>2</sup> C bus data for IC control
102	VSYN	O	Vertical sync for OSD
103	HSYN	O	Horizontal sync for OSD
104	COR/RSTOUT	O	Not used
105	BLANK	O	Ys for OSD/Teletext
106	VDD33	I	3.3V
107	VSS33	I	GND
108	XTAL1	I	6MHz
109	XTAL2	O	6MHz
110	VSSA	I	GND
111	VDDA	I	Not used
112	R	O	R for OSD Teletext
113	G	O	G for OSD Teletext
114	B	I	B for OSD Teletext
115	VSSA	I	GND
116	VDDA	I	2.5V
117	CVBS2	I	Video for Teletext
118	VSSA	I	GND
119	VDDA	I	2.5V
120	CVBS1B	I	Video for Teletext
121	CVBS1A	I	Video for Teletext
122	VSSA	I	GND
123	VDDA	I	2.5V
124	P5.0	I	AFT for tuner
125	P5.1(KEY1)	I	Key scan data 1 [ON:H]
126	P5.2	I	AGC for tuner
127	P5.3(KEY2)	I	Key scan data 2 [ON:H]
128	TMODE	I	Test purpose

### 2.2.3 SUB CPU PIN FUNCTION (IC7807)

Pin No.	Pin name	I/O	Function
1	(SYSTEM0)	I	GND
2	(SYSTEM3)	I	GND
3	AVCC	-	5V
4	X2	-	Sub clock
5	X1	-	Sub clock
6	VCL	-	Internal down voltage
7	RES	I	Reset [Reset : L]
8	TEST	I	Operation test for SUB CPU
9	VSS	-	GND
10	OSC2	O	10MHz oscillation for system clock
11	OSC1	I	10MHz oscillation for system clock
12	VCC	-	5V
13	NC	O	Not used
14	NC	O	Not used
15	BL_D2	O	Back light 20ms delay for LCD panel [On:L]
16	BL_D1	O	Back light 10ms delay for LCD panel [On:L]
17	I2C_STOP	O	Not used
18	BL_ON	O	Back light reset for LCD panel [Reset:L]
19	NC	O	Not used
20	NC	O	Not used
21	NC	O	Not used
22	NC	O	Not used
23	SDA1	I/O	I <sup>2</sup> C bus data (For Sub memory)
24	A.DIM	O	Not used
25	SCL1	O	I <sup>2</sup> C bus clock (For Sub memory)
26	SDA0	I/O	I <sup>2</sup> C bus data (For general)
27	SCL0	O	I <sup>2</sup> C bus clock (For general)
28	NC	O	Not used
29	NC	O	Not used
30	NC	O	Not used
31	NC	O	Not used
32	NC	O	Not used
33	NC	O	Not used
34	NC	O	Not used
35	NMI	I	Port for writing on board [Writing:L]
36	NC	O	Not used
37	(HD)	I	Not used
38	NC	O	Not used
39	(REMO)	I	Not used
40	NC	O	Not used
41	P85	-/I	Not used
42	P86	-	Not used
43	P87	-	Not used
44	SCK3	O	Port for writing on board
45	RXD	I	Port for writing on board
46	TXD	O	Port for writing on board
47	(PROTECTOR0)	I	Not used
48	NC	O	Not used
49	RXD2	I	Port for communication (Main CPU)
50	TXD2	O	Port for communication (Main CPU)
51	NC	O	Not used
52	(ACTIVE)	I	Not used
53	VD	I	Vertical sync
54	(REC_DET)	I	Not used
55	(PSS)	I	Not used
56	(ALARM)	I	Not used
57	(SYSTEM2)	I	Not used
58	(SYSTEM1)	I	Not used
59	(PROTECTOR1)	I	Not used
60	(AMP_PRO2)	I	Not used
61	(AMP_PRO1)	I	Not used
62	EE_CDS	I	Not used
63	(KEY_IN1)	I	Not used
64	(KEY_IN2)	I	Not used

## SECTION 3

### DISASSEMBLY

#### 3.1 DISASSEMBLY PROCEDURE

##### NOTE:

Since this model adopts a layer structure, follow the procedure below in disassembling this model.  
Be careful enough not to damage or scratch parts.

##### 3.1.1 REMOVING THE STAND

- (1) Remove the 2 screws [A], and remove the STAND COVER.
- (2) Remove the 4 screws [B], and remove the STAND.

##### 3.1.2 REMOVING THE REAR COVER

- Remove the STAND.
  - (1) Remove the JACK COVER (L/R).
  - (2) Remove the 7 screws [C], 3 screws [D], and 2 screws [E] (12 screws in total).
  - (3) Remove the REAR COVER.

##### 3.1.3 REMOVING THE REGULATOR PWB / COOLING FAN

- Remove the STAND.
- Remove the REAR COVER.
  - (1) Pull out the wire of COOLING FAN.
  - (2) Remove the 5 screws [F], and remove the FAN BRACKET.
  - (3) Remove the 2 screws [Y], and remove the COOLING FAN.
  - (4) Remove the REGULATOR PWB.

##### 3.1.4 REMOVING THE RECEIVER PWB

- Remove the STAND.
- Remove the REAR COVER.
- Remove the FAN BRACKET.
  - (1) Remove the 2 screws [G] and 3 screws [H] (5 screws in total). Then, remove the TERMINAL BASE.
  - (2) Remove the 6 screws [J], and remove the RECEIVER PWB.

##### 3.1.5 REMOVING THE FRONT CONTROL PWB CONTROL / FRONT SENSOR PWB

- Remove the STAND.
- Remove the REAR COVER.
  - (1) Remove the 2 screws [K], and remove the CONTROL KNOB.
  - (2) Remove the 2 screws [L], and remove the FRONT CONTROL PWB.
  - (3) Remove the FRONT SENSOR PWB.

##### 3.1.6 REMOVING THE VIDEO PWB / MI-COM & DIST MODULE PWB

- Remove the STAND.
- Remove the REAR COVER.
- Remove the FAN BRACKET.
  - (1) Remove the 1 screw [M] and 1 screw [N]. Then, remove the JACK BASE.
  - (2) Remove the 4 screws [P], and remove the VIDEO PWB.
  - (3) Remove the 6 screws [R], and remove the VIDEO PWB BRACKET.
  - (4) Remove the 4 screws [S], and remove the MI-COM & DIST MODULE PWB from the VIDEO PWB BRACKET.

##### 3.1.7 REMOVING THE POWER PWB

- Remove the STAND.
- Remove the REAR COVER.
- Remove the FAN BRACKET.
- Remove the RECEIVER PWB.
  - (1) Remove the 4 screws [T], and remove the RECEIVER PWB BRACKET.
  - (2) Remove the 1 screw [U], and remove the POWER CORD HOLDER.
  - (3) Remove the 5 screws [V], and 1 screw [W]. Then, remove the POWER PWB.
  - (4) Remove the 4 screws [X], and remove the CHASSIS BASE.

##### 3.1.8 REMOVING THE TUNER PWB / MSP PWB

- Remove the STAND.
- Remove the REAR COVER.
  - (1) Remove the 2 screws [Q], and remove the TUNER PWB BASE.
  - (2) Remove the 4 screws [Z], and remove the TUNER PWB and MSP PWB.

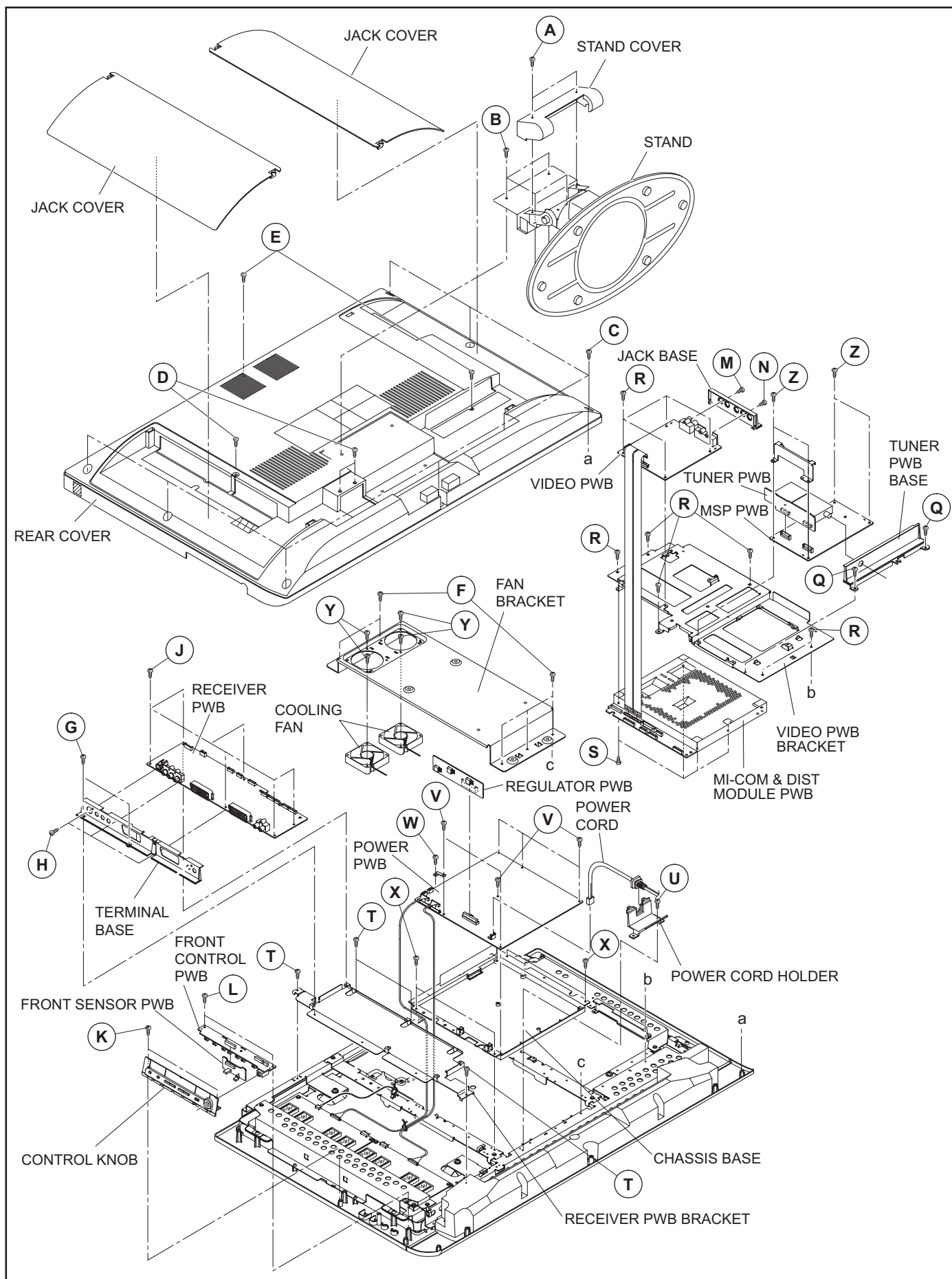


Fig.1



### 3.1.9 REMOVING THE SPEAKER

- Remove the STAND.
- Remove the REAR COVER.
- (1) Remove the 5 screws [a], and remove the SPEAKER BOX.
- (2) Remove the 4 screws [b], and remove the SPEAKER (L / R).
- (3) Remove the 4 screws [c], and remove the DUCT(L/R).

#### NOTE:

Since the speaker is attached in a certain direction, attach the speaker in the same correct direction as it has been attached.

### 3.1.10 REMOVING THE LCD PANEL UNIT

- Remove the STAND.
- Remove the REAR COVER.
- Remove the POWER CORD.
- Remove the RECEIVER.
- Remove the FRONT CONTROL PWB.
- Remove the FRONT SENSOR PWB.
- Remove the VIDEO PWB.
- Remove the DIGITAL INPUT MODULE PWB.
- Remove the MI-COM & DIST MODULE PWB.
- Remove the POWER PWB.
- (1) Remove the 3 screws [d], the 2 screws [e] and the 2 screws [f] (7 screws in total). Then, remove the FRAME(R).
- (2) Remove the 3 screws [g], and the 2 screws [h] (4 screws in total). Then, remove the FRAME (L).
- (3) Remove the 4 screws [j]. Then, remove the CENTER FRAME.
- (4) Remove the 2 screws [k] and the 1 screw [m] (3 screws in total). Then, remove the TOP FRAME.
- (5) Remove the 4 screws [n], and the 2 screws [p] (6 screws in total). Then, remove the BOTTOM FRAME.
- (6) Remove the 8 screws [r]. Then, remove the TOP INVERTER UNIT and BOTTOM INVERTER UNIT.
- (7) Remove the 1 screw [q]. Then, remove the LCD PANEL UNIT.

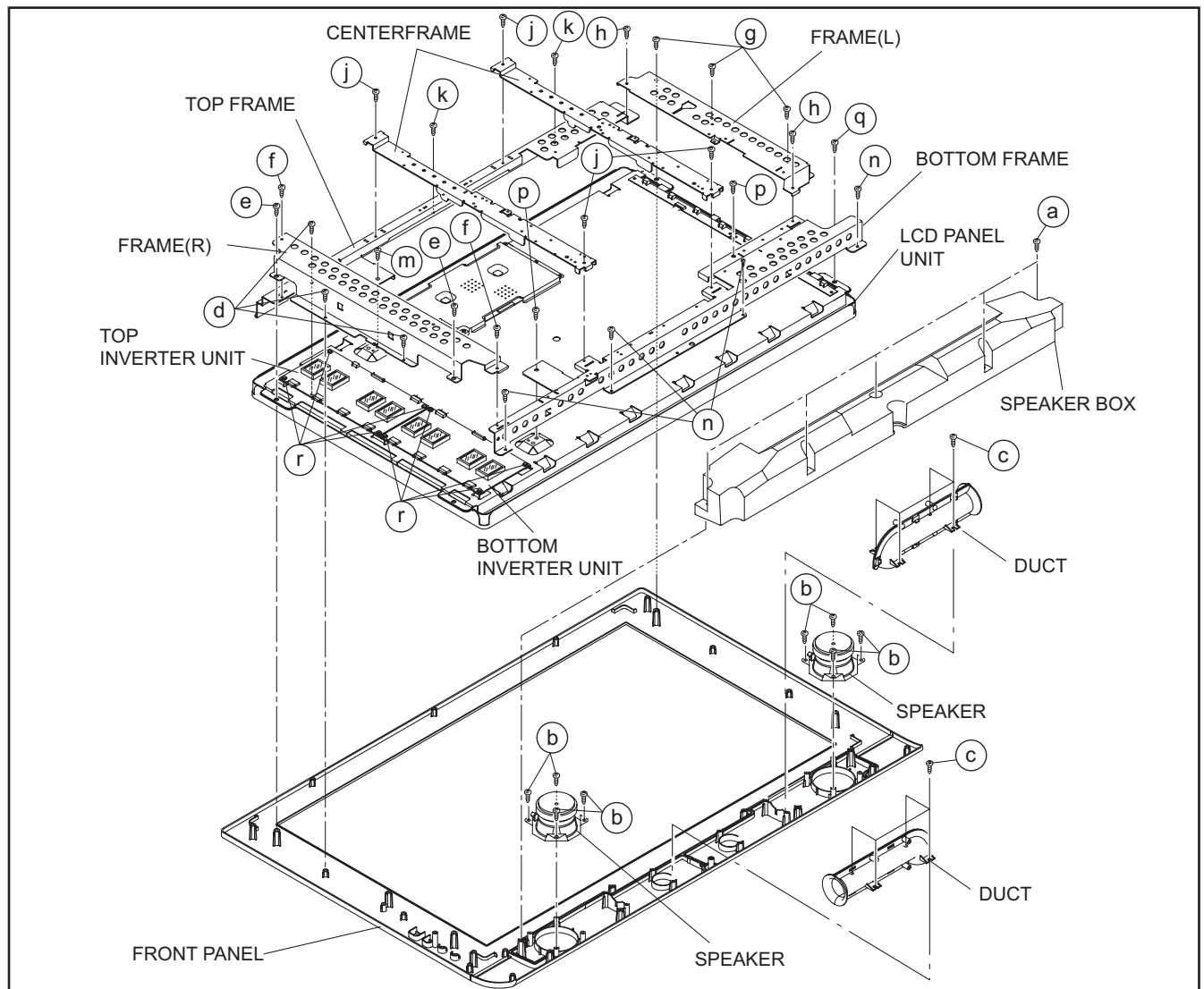


Fig.2

### 3.2 REPLACEMENT OF MEMORY IC

This unit uses the nonvolatile memory IC. The memory IC memories data for video and deflection circuits. To replace the memory IC without the data written, malfunctions might occur while power is on, and the normal image might not appear. When replacing the memory IC, be sure to use the IC written with the initial values of data.

#### 3.2.1 PROCEDURE FOR REPLACING THE MEMORY IC

- (1) Switch the power off and unplug the power cord from the wall outlet.
- (2) Replacing the memory IC. [Be sure to use the IC written with the initial values of data]
- (3) Plug the power cord into the wall outlet and switch the power on.
- (4) Check and setting of SYSTEM CONSTANT SET
  - a) Press the [INFORMATION] key and [MUTING] key on the remote control unit simultaneously.  
The SERVICE MENU screen will be displayed. (See Fig.1)
  - b) In the SERVICE MENU, press the [INFORMATION] key and [MUTING] key simultaneously.  
Then, the SYSTEM CONSTANT SET screen will be displayed. (See Fig.2)
  - c) Check whether the setting value of the SYSTEM CONSTANT SET is the same as these indicated in Table 1.
  - d) Press the [INFORMATION] key twice to return to the normal screen.
- (5) Receive channel setting  
Refer to the OPERATING INSTRUCTIONS and set the receive channels.
- (6) User setting  
Memorize the user setting items. The [USER SETTINGS OF MENU] setting is as next page.
- (7) Setting of SERVICE MENU  
Check the setting items in the SERVICE MENU, set if necessary. For setting method, please refer to the [ADJUSTMENT PREPARATION] to [ADJUSTMENT PROCEDURE] of ADJUSTMENT section.

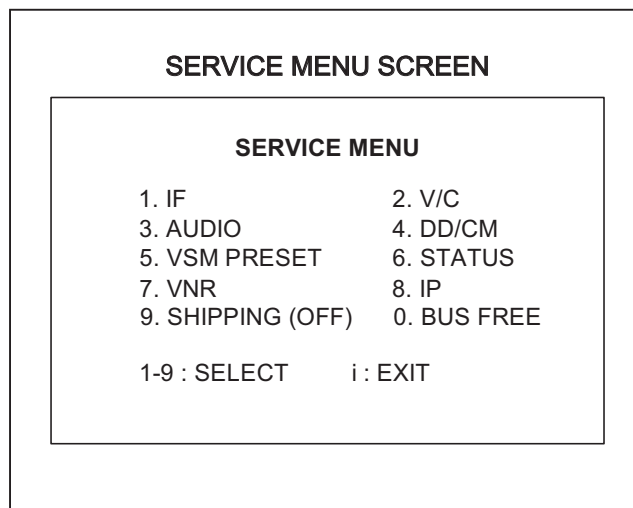


Fig.1

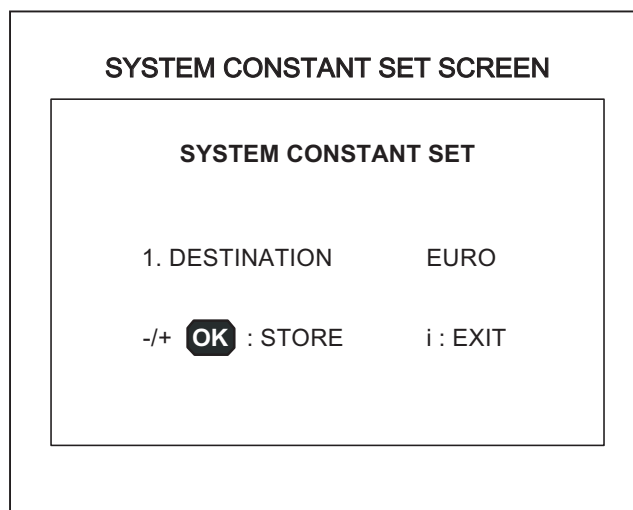


Fig.2

#### 3.2.2 SETTING OF THE SYSTEM CONSTANT SET

Setting item	Setting content	Setting value
DESTINATION	ASIA / EURO	EURO

Table 1

#### 3.2.3 FACTORY SHIPMENT SETTING

##### 3.2.3.1 USER SETTING OF SWITCHES ON REMOTE CONTROL UNIT

Setting item	Setting value
POWER	OFF
CHANNEL	PR1
PRESET CHANNEL	Refer to OPERATION INSTRUCTIONS
VOLUME	10
ZOOM	PANORAMIC
3D SOUND	OFF

Table 2

### 3.2.3.2 USER SETTINGS OF MENU

Setting item	Setting value	Setting item	Setting value
POWER	OFF	<b>SOUND SETTING</b>	
CHANNEL	PR1	BASS	Centre
		TREBLE	Centre
PRESET CHANNEL	Refer to OPERATING INSTRUCTIONS	BALANCE	Centre
		SPEAKER	ON
VOLUME	10	BBE	ON
<b>PICTURE SETTING</b>		3D SOUND	OFF
PICTURE MODE	BRIGHT	A. H. B	ON
COLOUR TEMP.	COOL	HEADPHONE	VOLUME 20
			TV SPEAKER OFF
			OUTPUT MAIN
<b>PICTURE FEATURES</b>		<b>EXT SETTING</b>	
DIGITAL VNR	AUTO	S-IN	---
Super DigiPure	AUTO	ID LIST	---
COLOUR SYSTEM	TV Depends on PR/CH	DUBBING	EXT-1 → EXT-2
	EXT AUTO	<b>FEATURES</b>	
MOVIE THEATRE	AUTO	SLEEP TIMER	OFF
4:3 AUTO ASPECT	PANORAMIC	BLUE BACK	ON
COLOUR MANAGEMENT	ON	CHILD LOCK / CHANNEL GUARD SET ID NO	0000
PIP POSISION	Right below	<b>INSTALL</b>	
ZOOM	PANORAMIC	LANGUAGE	ENGLISH
		AUTO PROGRAM	Only for preset channels
		EDIT/MANUAL	Only for preset channels

Table 3

### 3.2.3.3 VSM PRESET SETTING

Item No.	Item	Variable range	Setting value					
			PICTURE MODE			COLOUR TEMP.		
			BRIGHT	STD	SOFT	COOL	NORMAL	WARM
1	CONT	-16~16	6	0	0	-	-	-
2	BRIGHT	-16~16	-6	0	0	-	-	-
3	SHARP	-16~16	3	0	-2	-	-	-
4	COLOUR	-16~16	0	0	0	-	-	-
5	TINT	-16~16	0	0	0	-	-	-
6	B. LIGHT	-16~16	16	16	-8	-	-	-
1	WDR R	-64~63	-	-	-	-8	0	0
2	WDR G	-64~63	-	-	-	-3	0	-6
3	WDR B	-64~63	-	-	-	23	0	-3

Table 4

#### 3.2.3.3.1 SETTING OF VSM PRESET

- (1) Enter "5.VSM PRESET" from the SERVICE MENU.
- (2) Press the [OK] key to select BRIGHT/STD/SOFT/COOL/NORMAL/WARM mode.
- (3) Select the setting item using the [FUNCTION (▲/▼)] key.
- (4) Set the value using the [FUNCTION (+/-)] key.
- (5) Press the [OK] key to memorize the set value.
- (6) Press the [INFORMATION] key twice to return to the normal screen.

### 3.2.3.4 SERVICE MENU SETTING ITEMS

Setting item	Setting value	Setting item	Setting value
1.IF	1.VCO 2.ATT ON/OFF	6.STATUS	(Do not adjust)
2.V/C	1.CUT OF R 2.CUT OF G 3.CUT OF B 4.DRIVE R 5.DRIVE G 6.DRIVE B 7.TWN HI R 8.TWN HI B 9.BRIGHT 10.CONT 11.TWN BRG 12.TWN CNT 13.COLOUR 14.HUE 15.BY GAIN 16.TWN COL 17.TWN TNT 18.B OF MR 19.B OF MB 20.B OF SR 21.B OF SB 22.M BOFST 23.M ROFST S01 ~ S99 A01 ~ A17 PDA01 ~ PDA12	7.VNR (Do not adjust)	1.MYLV 2.ONMVF 3.MYCOR 4.MYGA 5.YEGON 6.YEGL 7.YLTL 8.MCLV 9.MCGA 10.MCCOR 11.CLTL 12.YNGA 13.COR_OF 14.LPF_OF 15.YCTL 16.YNCL 17.YNCON
3.AUDIO (Do not adjust)	1.ERROR LIMIT 2.A2 ID THR 3.Q-PEAK 4.SOUND LEVEL / SOUND SYSTEM B/G	8.IP (Do not adjust)	PPA001 ~ PPA008 PPB001 ~ PPB036 PPC001 ~ PPC007 ADS001 ~ ADS034 IPA001 ~ IPA120 IPB001 ~ IPB088 IPC001 ~ IPC044 IPD001 ~ IPD058
4.DD/CM	DDT01 ~ DDT34 CMT01 ~ CMT57		
5.VSM PRESET	PICTURE MODE 1.CONT 2.BRIGHT 3.SHARP 4.COLOUR 5.TINT 6.B. LIGHT COLOUR TEMP. 1.WDR R 2.WDR G 3.WDR B	9.SHIPPING(OFF)	(Do not use under the adjustment)

Table 5

### 3.3 REPLACEMENT OF CHIP COMPONENT

#### 3.3.1 CAUTIONS

- (1) Avoid heating for more than 3 seconds.
- (2) Do not rub the electrodes and the resist parts of the pattern.
- (3) When removing a chip part, melt the solder adequately.
- (4) Do not reuse a chip part after removing it.

#### 3.3.2 SOLDERING IRON

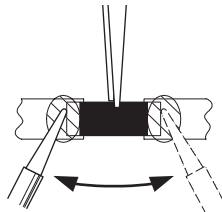
- (1) Use a high insulation soldering iron with a thin pointed end of it.
- (2) A 30w soldering iron is recommended for easily removing parts.

#### 3.3.3 REPLACEMENT STEPS

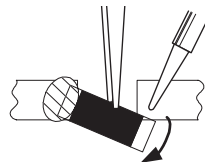
##### 1. How to remove Chip parts

###### [Resistors, capacitors, etc.]

- (1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.



- (2) Shift with the tweezers and remove the chip part.

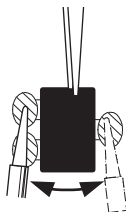


###### [Transistors, diodes, variable resistors, etc.]

- (1) Apply extra solder to each lead.



- (2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.



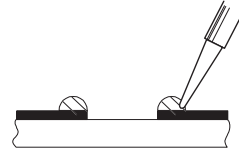
#### NOTE :

After removing the part, remove remaining solder from the pattern.

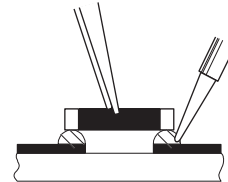
##### 2. How to install Chip parts

###### [Resistors, capacitors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.

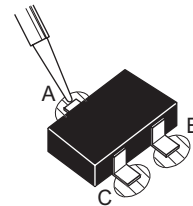


- (2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

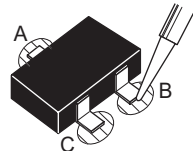


###### [Transistors, diodes, variable resistors, etc.]

- (1) Apply solder to the pattern as indicated in the figure.
- (2) Grasp the chip part with tweezers and place it on the solder.
- (3) First solder lead **A** as indicated in the figure.



- (4) Then solder leads **B** and **C**.



## SECTION 4

### ADJUSTMENT

#### 4.1 ADJUSTMENT PREPARATION

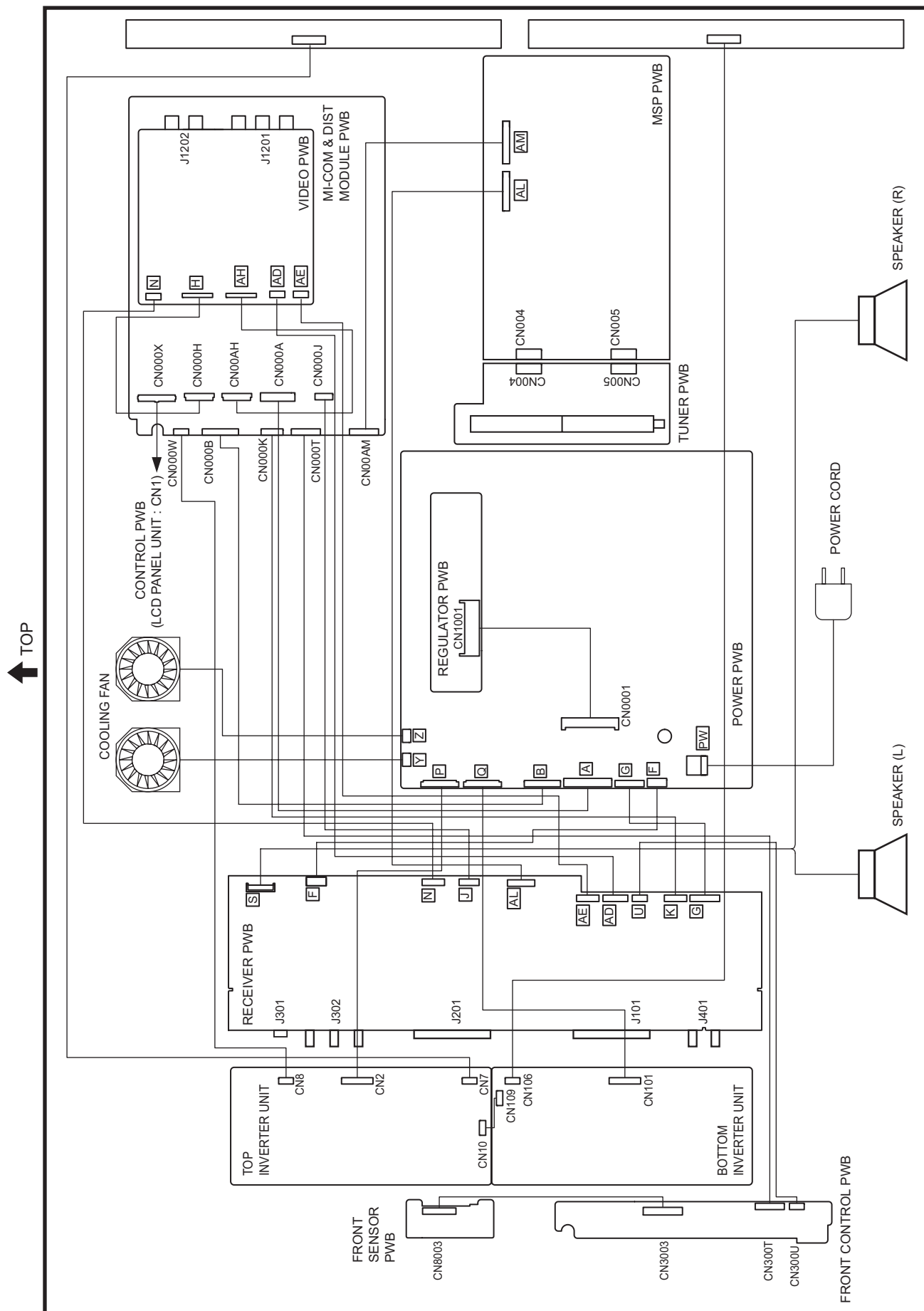
- (1) Prior to the following procedure, be sure to connect the receiver unit and the display unit.
- (2) Adjustment of many Majority of the adjustment items for this unit is performed using the remote control.
- (3) However, adjustment of some adjustment items is performed in the conventional way, i.e. with components on the boards.
- (4) Ensure that the power supply is AC220V.
- (5) Allow the set and the measuring devices to run for at least 30 minutes.
- (6) Do not alter settings of items/preset values on the service screen that are not stated in this manual.
- (7) Unless otherwise stated in the "ADJUSTMENT PROCEDURE" section, follow the settings for the features stated below using the remote control.

#### 4.2 MEASURING INSTRUMENT AND FIXTURES

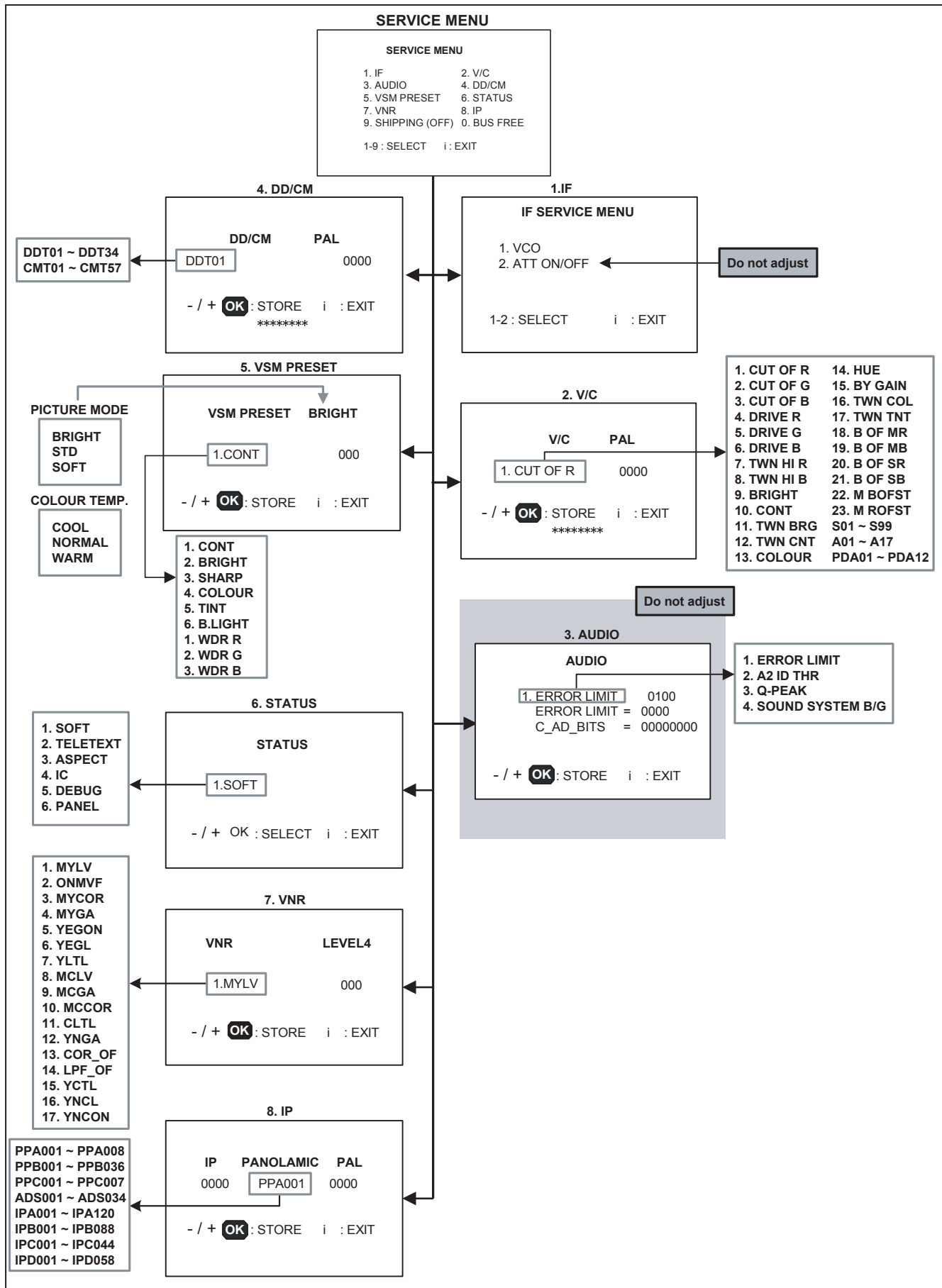
- DC voltmeter (or Digital voltmeter)
- Oscilloscope
- Signal generator (Pattern generator)
- Remote control unit

Setting item	Settings
PICTURE MODE	STANDARD
PICTURE adjustment	All center (00)
COLOUR TEMP.	NORMAL
DIGITAL VNR	MIN
Super Digi Pure	AUTO
SOUND adjustment	All center (00)
BBE	OFF
A.H.B	OFF
ZOOM	FULL

### 4.3 ADJUSTMENT LOCATION & WIRING



## 4.4 SERVICE MENU SCREEN





## 4.5 BASIC OPERATION OF THE SERVICE MENU MODE [USING REMOTE CONTROL UNIT]

### 4.5.1 TOOLS OF SERVICE MENU OPERATION

Operate the SERVICE MENU with the remote control unit.

### 4.5.2 HOW TO ENTER THE SERVICE MENU MODE

- (1) Press the [INFORMATION] key and the [MUTING] key of the REMOTE CONTROL UNIT simultaneously, and the SERVICE MENU screen of Fig.4 will be displayed.
- (2) When the Main Menu is displayed, press any key of the [1] to [0] key to enter the corresponding menu mode.  
\*Press any of the [1] to [0] keys before the Service Menu mode disappears.
- (3) Select the service item using the [FUNCTION (▲/▼)] key.
- (4) Set the value using the [FUNCTION (◀/▶)] key.
- (5) Press the [OK] key to save the value.

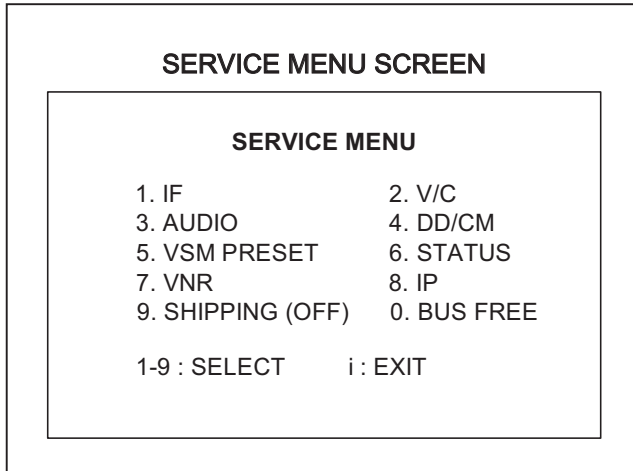


Fig.4

### 4.5.3 HOW TO EXIT THE SERVICE MENU MODE

Press the [INFORMATION] key to exit the Service Menu mode.

### 4.5.4 SERVICE CONTROL KEY LAYOUT ON THE REMOTE CONTROL UNIT

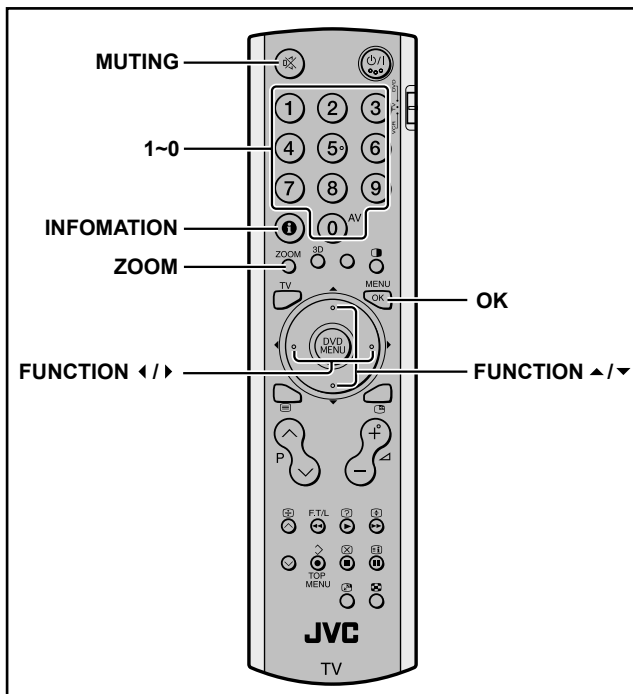


Fig.5

### 4.5.5 SETTINGS OF THE SERVICE MENUS

#### 1. IF (VCO adjustment, ATT setting)

[Do not adjust]

#### 2. V/C (VIDEO setting)

[Do not change settings of items that are not included in the "ADJUSTMENT PROCEDURE".]

Sets output data to the video circuit.

- [Function (▲/▼)] key  
For scrolling up/down the setting items.
- [Function (◀/▶)] key  
For scrolling up/down the setting values.

#### 3. AUDIO (SOUND setting)

[Do not adjust]

#### 4. DD/CM (Panel picture processing setting)

[Do not change settings of items that are not included in the "ADJUSTMENT PROCEDURE".]

Sets output data to the deflection circuit.

- [Function (▲/▼)] key  
For scrolling up/down the setting items.  
→ DDT01... ↔ CMT01... ←
- [Zoom (red)] key  
For switching to the next item.  
→ DDT01 → CMT01 →
- [Function (◀/▶)] key  
For scrolling up/down the setting values.

#### 5. VSM PRESET (PICTURE preset setting)

[Refer to page VSM PRESET SETTING.]

#### 6. STATUS

(The version of software, the aspect, and the state of debugging are displayed.)

[Setting for this item is not required in servicing]

#### 7. VNR (Noise reduction setting)

[Do not adjust]

Sets output data to the digital noise reduction circuit.

#### 8. IP (DIST setting)

[Do not adjust]

Sets output data to the DIST circuit.

#### 9. SHIPPING (OFF)

[Setting for this item is not required in servicing]

#### 10. BUE FREE

[Setting for this item is not required in servicing]

#### 4.6 DEFAULT VALUES IN THE SERVICE MENU SETTING MODE

- Perform fine-tuning based on the "default values" using the remote control when in the SERVICE MENU setting mode.
- The "default values" serve only as an indication rough standard and therefore the values with which optimal display can be achieved may be different from the default values. But, don't change the values that are not written in "ADJUSTMENT PROCEDURE". They are fixed values.

##### 4.6.1 [2. V/C]

##### 4.6.1.1 VIDEO SYSTEM

Item No.	Item	Variable range	Setting value								
			TV		EXT-1 / 2 / 3			EXT-4			
			PAL	SECAM	PAL	SECAM	NTSC	625i	525i	625p	525p
1	CUT OF R	0000~0255	0088	←	←	←	←	0000	←	←	←
2	CUT OF G	0000~0255	0101	←	←	←	←	0000	←	←	←
3	CUT OF B	0000~0255	0106	←	←	←	←	0000	←	←	←
4	DRIVE R	0000~0255	0129	←	←	←	←	0000	←	←	←
5	DRIVE G	0000~0255	0112	←	←	←	←	0000	←	←	←
6	DRIVE B	0000~0255	0110	←	←	←	←	0000	←	←	←
7	TWIN HI R	0000~0127	0071	←	←	←	←	0000	←	←	←
8	TWIN HI B	0000~0127	0068	←	←	←	←	0000	←	←	←
9	BRIGHT	0000~0255	0013	←	←	←	←	0000	←	←	←
10	CONT	0000~0015	0006	←	←	←	←	0000	←	←	←
11	TWN BRG	0000~0127	0080	←	←	←	←	-002	←	0000	←
12	TWN CNT	0000~0015	0008	←	←	←	←	0000	←	←	←
13	COLOUR	0000~0015	0007	←	0000	←	0007	0000	←	←	←
14	HUE	0000~0063	0000	←	0034	←	←	0000	←	←	←
15	BY GAIN	0000~0063	0043	←	0000	←	0043	0000	←	←	←
16	TWN COL	0000~0015	0008	←	0002	←	0008	0002	←	←	←
17	TWN TNT	0000~0063	0034	←	0000	←	0034	←	←	←	←
18	B OF MR	0000~0015	0008	←	←	←	←	←	←	←	←
19	B OF MB	0000~0015	0008	←	←	←	←	←	←	←	←
20	B OF SR	0000~0015	0008	←	←	←	←	←	←	←	←
21	B OF SB	0000~0015	0008	←	←	←	←	←	←	←	←
22	M BOFSET	0000~0007	0000	←	←	←	←	←	←	←	←
23	M ROFSET	0000~0007	0000	←	←	←	←	←	←	←	←

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
S01	COLOUR	0000~0255	0120	0120	0138
S02	HUE	-128~0127	0000	0000	0000
S03	(NO DISPLAY)	-128~0127	0000	0000	0000
S04	(NO DISPLAY)	-128~0127	0000	0000	0000
S05	BRIGHT	0000~0255	0055	0055	0060
S06	CONT	0000~0255	0128	0128	0128
S07	(NO DISPLAY)	-128~0127	0000	0000	0000
S08	(NO DISPLAY)	-128~0127	0000	0000	0000
S09	(NO DISPLAY)	0000~0255	0140	0140	0138
S10	(NO DISPLAY)	-128~0127	0000	0000	0000
S11	(NO DISPLAY)	-128~0127	0006	0006	0006
S12	(NO DISPLAY)	0000~0003	0000	0000	0000

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
S13	R GAIN	0000~0255	0255	0255	0255
S14	(NO DISPLAY)	-128~0127	0000	0000	0000
S15	G GAIN	0000~0255	0237	0237	0237
S16	(NO DISPLAY)	-128~0127	0000	0000	0000
S17	B GAIN	0000~0255	0230	0230	0230
S18	(NO DISPLAY)	-128~0127	0000	0000	0000
S19	(NO DISPLAY)	0000~0255	0128	0128	0128
S20	(NO DISPLAY)	-128~0127	0000	0000	0000
S21	(NO DISPLAY)	0000~0255	0128	0128	0128
S22	(NO DISPLAY)	-128~0127	0000	0000	0000
S23	(NO DISPLAY)	0000~0255	0128	0128	0128
S24	(NO DISPLAY)	-128~0127	0000	0000	0000
S25	(NO DISPLAY)	0000/0001	0000	0000	0000
S26	(NO DISPLAY)	0000/0001	0000	0000	0000
S27	(NO DISPLAY)	0000/0001	0000	0000	0000
S28	(NO DISPLAY)	0000/0001	0000	0000	0000
S29	(NO DISPLAY)	0000/0001	0000	0000	0000
S30	(NO DISPLAY)	0000~0031	0000	0000	0000
S31	(NO DISPLAY)	0000~0063	0002	0002	0002
S32	(NO DISPLAY)	0000~0063	0019	0019	0018
S33	(NO DISPLAY)	0000/0001	0001	0001	0001
S34	(NO DISPLAY)	0000/0001	0001	0001	0001
S35	(NO DISPLAY)	0000/0001	0000	0000	0000
S36	(NO DISPLAY)	0000~0031	0000	0000	0000
S37	(NO DISPLAY)	0000~0255	0220	0220	0220
S38	(NO DISPLAY)	0000~0063	0050	0050	0050
S39	(NO DISPLAY)	0000~0063	0060	0060	0060
S40	(NO DISPLAY)	0000/0001	0001	0001	0001
S41	(NO DISPLAY)	0000/0001	0001	0001	0001
S42	(NO DISPLAY)	0000~0003	0001	0001	0001
S43	(NO DISPLAY)	0000~0031	0009	0009	0009
S44	(NO DISPLAY)	0000~0003	0001	0001	0001
S45	(NO DISPLAY)	0000~0003	0002	0002	0002
S46	(NO DISPLAY)	0000~0015	0015	0015	0015
S47	(NO DISPLAY)	0000~0015	0015	0015	0015
S48	(NO DISPLAY)	0000~0015	0015	0015	0015
S49	(NO DISPLAY)	0000/0001	0000	0000	0000
S50	(NO DISPLAY)	0000~0255	0002	0002	0002
S51	(NO DISPLAY)	0000/0001	0000	0000	0000
S52	(NO DISPLAY)	0000~0255	0076	0076	0076
S53	(NO DISPLAY)	0000/0001	0000	0000	0000
S54	(NO DISPLAY)	0000~0255	0006	0006	0006
S55	(NO DISPLAY)	0000/0001	0000	0000	0000
S56	(NO DISPLAY)	0000~0255	0094	0094	0094
S57	(NO DISPLAY)	0000~0255	0000	0000	0000

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
S58	(NO DISPLAY)	0000~0015	0000	0000	0000
S59	(NO DISPLAY)	0000~0255	0000	0000	0000
S60	(NO DISPLAY)	0000~0015	0000	0000	0000
S61	(NO DISPLAY)	0000/0001	0001	0001	0001
S62	(NO DISPLAY)	0000~0127	0016	0016	0016
S63	(NO DISPLAY)	0000/0001	0000	0000	0000
S64	(NO DISPLAY)	0000~0127	0000	0000	0000
S65	(NO DISPLAY)	0000~0003	0002	0002	0002
S66	(NO DISPLAY)	0000~0003	0001	0001	0001
S67	(NO DISPLAY)	0000~0003	0002	0002	0003
S68	(NO DISPLAY)	0000~0015	0000	0000	0000
S69	(NO DISPLAY)	0000~0063	0019	0019	0019
S70	(NO DISPLAY)	0000/0001	0001	0001	0001
S71	(NO DISPLAY)	0000~0255	0255	0255	0255
S72	(NO DISPLAY)	0000~0255	0255	0255	0255
S73	(NO DISPLAY)	0000~0255	0255	0255	0255
S74	(NO DISPLAY)	0000~0031	0000	0000	0000
S75	(NO DISPLAY)	0000~0031	0000	0000	0000
S76	(NO DISPLAY)	-128~0128	0000	0000	0000
S77	(NO DISPLAY)	-128~0128	0000	0000	0000
S78	(NO DISPLAY)	0000~0255	0255	0255	0255
S79	(NO DISPLAY)	0000~0255	0000	0000	0000
S80	(NO DISPLAY)	0000~0255	0255	0255	0255
S81	(NO DISPLAY)	0000~0255	0000	0000	0000
S82	(NO DISPLAY)	0000~0255	0255	0255	0255
S83	(NO DISPLAY)	0000~0255	0000	0000	0000
S84	(NO DISPLAY)	0000~0255	0143	0143	0143
S85	(NO DISPLAY)	0000~0255	0255	0255	0255
S86	(NO DISPLAY)	0000~0255	0255	0255	0255
S87	(NO DISPLAY)	0000~0003	0003	0003	0003
S88	(NO DISPLAY)	0000~0007	0000	0000	0000
S89	(NO DISPLAY)	0000~0255	0000	0000	0000
S90	(NO DISPLAY)	0000~0127	0000	0000	0000
S91	(NO DISPLAY)	0000~0007	0007	0007	0007
S92	(NO DISPLAY)	0000~0031	0031	0031	0031
S93	(NO DISPLAY)	0000~0007	0007	0007	0007
S94	(NO DISPLAY)	0000~0031	0031	0031	0031
S95	(NO DISPLAY)	0000~0255	0060	0060	0050
S96	(NO DISPLAY)	0000~0015	0003	0003	0006
S97	(NO DISPLAY)	0000~0063	0040	0040	0040
S98	(NO DISPLAY)	0000~0063	0000	0000	0000
S99	(NO DISPLAY)	0000~0063	0000	0000	0000

#### 4.6.1.2 AUDIO SYSTEM

Item No.	Item	Variable range	Setting value
A01	(NO DISPLAY)	0000~0007	0001
A02	(NO DISPLAY)	0000~0007	0001
A03	(NO DISPLAY)	0000~0007	0001
A04	(NO DISPLAY)	0000~0007	0000
A05	(NO DISPLAY)	0000~0009	0003
A06	(NO DISPLAY)	0000~0015	0004
A07	(NO DISPLAY)	0000~0015	0006
A08	(NO DISPLAY)	0000~0015	0003
A09	(NO DISPLAY)	0000~0007	0006
A10	(NO DISPLAY)	0000~0007	0004
A11	(NO DISPLAY)	0000~0063	0063
A12	(NO DISPLAY)	0000~0063	0063
A13	(NO DISPLAY)	0000~0003	0000
A14	(NO DISPLAY)	0000~0007	0000
A15	(NO DISPLAY)	0000~0003	0000
A16	(NO DISPLAY)	0000~0003	0000
A17	(NO DISPLAY)	0000~0003	0000

Item No.	Item	Variable range	Setting value
PDA01	(NO DISPLAY)	0000~0255	0000
PDA02	(NO DISPLAY)	0000~0255	0000
PDA03	(NO DISPLAY)	0000~0255	0000
PDA04	(NO DISPLAY)	0000~0255	0000
PDA05	(NO DISPLAY)	0000/0001	0000
PDA06	(NO DISPLAY)	0000/0001	0000
PDA07	(NO DISPLAY)	0000~0255	0000
PDA08	(NO DISPLAY)	0000~0255	0000
PDA09	(NO DISPLAY)	0000~0255	0000
PDA10	(NO DISPLAY)	0000~0255	0000
PDA11	(NO DISPLAY)	0000~0255	0000
PDA12	(NO DISPLAY)	0000~0127	0000

#### 4.6.2 [3.AUDIO] (MULTISOUND SYSTEM) (\*All fixed)

Item No.	Item	Variable range	Setting value
1	ERROR LIMIT	0000~0FF0	0100
2	A2 ID THR	0000~00FF	0019
3	Q-PEAK	-	-
4	SOUND LEVEL	F00F~FFFF	FFFF

#### 4.6.3 [4.DD/CM]

##### NOTE:

For reference, initial setting values (except OSD-G/B/R) in the following conditions are written here.

- Input signal : PAL/SECAM/NTSC
- Picture mode : Standard
- Zoom : Full
- Multi screen : Single screen
- Colour temp. : Normal

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
DDT01	(NO DISPLAY)	0000~0015	0000	0000	0000
DDT02	(NO DISPLAY)	0000~0255	0022	0022	0022
DDT03	(NO DISPLAY)	0000~0255	0240	0240	0240
DDT04	(NO DISPLAY)	0000~0255	0255	0255	0255
DDT05	(NO DISPLAY)	0000~0255	0237	0237	0237
DDT06	(NO DISPLAY)	0000~0255	0230	0230	0230
DDT07	(NO DISPLAY)	0000~0003	0000	0000	0000
DDT08	(NO DISPLAY)	0000~0255	0255	0255	0255
DDT09	(NO DISPLAY)	0000~0003	0000	0000	0000
DDT10	(NO DISPLAY)	0000~0255	0000	0000	0000
DDT11	(NO DISPLAY)	0000~0007	0000	0000	0000
DDT12	(NO DISPLAY)	0000~0255	0090	0090	0090
DDT13	(NO DISPLAY)	0000~0255	0000	0000	0000
DDT14	(NO DISPLAY)	0000~0003	0000	0000	0000
DDT15	(NO DISPLAY)	0000~0007	0000	0000	0000
DDT16	(NO DISPLAY)	0000~0255	0021	0021	0021
DDT17	(NO DISPLAY)	0000/0001	0000	0000	0000
DDT18	(NO DISPLAY)	0000/0001	0000	0000	0000
DDT19	(NO DISPLAY)	0000~0063	0001	0001	0001
DDT20	(NO DISPLAY)	0000~0015	0000	0000	0000
DDT21	(NO DISPLAY)	0000~0015	0000	0000	0000
DDT22	(NO DISPLAY)	0000~0015	0000	0000	0000
DDT23	(NO DISPLAY)	0000~0015	0000	0000	0000
DDT24	(NO DISPLAY)	0000/0001	0000	0000	0000
DDT25	(NO DISPLAY)	0000/0001	0000	0000	0000
DDT26	(NO DISPLAY)	0000/0001	0000	0000	0000
DDT27	(NO DISPLAY)	0000~0007	0000	0000	0000
DDT28	(NO DISPLAY)	0000~0255	0250	0250	0250
DDT29	(NO DISPLAY)	0000~0003	0000	0000	0000
DDT30	(NO DISPLAY)	0000/0001	0000	0000	0000
DDT31	(NO DISPLAY)	0000~0007	0005	0005	0005
DDT32	(NO DISPLAY)	0000~0255	0170	0170	0170
DDT33	(NO DISPLAY)	0000~0255	0000	0000	0000
DDT34	(NO DISPLAY)	0000~0255	0032	0032	0032

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
CMT01	(NO DISPLAY)	0000~0003	0000	0000	0000
CMT02	(NO DISPLAY)	0000~0255	0090	0090	0090

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
CMT03	(NO DISPLAY)	0000~0255	0030	0030	0020
CMT04	(NO DISPLAY)	0000~0255	0030	0030	0030
CMT05	(NO DISPLAY)	0000~0063	0059	0059	0060
CMT06	(NO DISPLAY)	-128~0127	0005	0005	-002
CMT07	(NO DISPLAY)	-128~0127	0002	0002	0010
CMT08	(NO DISPLAY)	-128~0127	0000	0000	0000
CMT09	(NO DISPLAY)	-128~0127	0000	0000	0003
CMT10	(NO DISPLAY)	0000~0003	0000	0000	0000
CMT11	(NO DISPLAY)	0000~0255	0160	0160	0160
CMT12	(NO DISPLAY)	0000~0255	0020	0020	0020
CMT13	(NO DISPLAY)	0000~0255	0020	0020	0020
CMT14	(NO DISPLAY)	0000~0063	0000	0000	0059
CMT15	(NO DISPLAY)	-128~0127	0006	0006	-003
CMT16	(NO DISPLAY)	-128~0127	0005	0005	0005
CMT17	(NO DISPLAY)	-128~0127	0000	0000	0000
CMT18	(NO DISPLAY)	-128~0127	0005	0005	0000
CMT19	(NO DISPLAY)	0000~0003	0000	0000	0000
CMT20	(NO DISPLAY)	0000~0255	0196	0196	0196
CMT21	(NO DISPLAY)	0000~0255	0030	0030	0030
CMT22	(NO DISPLAY)	0000~0255	0050	0050	0055
CMT23	(NO DISPLAY)	0000~0063	0061	0061	0000
CMT24	(NO DISPLAY)	-128~0127	-003	-003	0003
CMT25	(NO DISPLAY)	-128~0127	0022	0022	0012
CMT26	(NO DISPLAY)	-128~0127	0006	0006	0005
CMT27	(NO DISPLAY)	-128~0127	0020	0020	0012
CMT28	(NO DISPLAY)	0000~0003	0001	0001	0001
CMT29	(NO DISPLAY)	0000~0255	0070	0070	0070
CMT30	(NO DISPLAY)	0000~0255	0035	0035	0035
CMT31	(NO DISPLAY)	0000~0255	0040	0040	0040
CMT32	(NO DISPLAY)	0000~0063	0000	0000	0000
CMT33	(NO DISPLAY)	-128~0127	0005	0005	0002
CMT34	(NO DISPLAY)	-128~0127	0016	0016	0015
CMT35	(NO DISPLAY)	-128~0127	0000	0000	-004
CMT36	(NO DISPLAY)	-128~0127	0016	0016	0020
CMT37	(NO DISPLAY)	0000~0255	0064	0064	0064
CMT38	(NO DISPLAY)	0000~0255	0066	0066	0068
CMT39	(NO DISPLAY)	0000~0255	0078	0078	0078
CMT40	(NO DISPLAY)	-128~0127	0000	0000	0000
CMT41	(NO DISPLAY)	-128~0127	0005	0005	0004
CMT42	(NO DISPLAY)	0000/0001	0000	0000	0000
CMT43	(NO DISPLAY)	0000~0255	0080	0080	0080
CMT44	(NO DISPLAY)	0000/0001	0001	0001	0001
CMT45	(NO DISPLAY)	0000~0255	0080	0080	0080
CMT46	(NO DISPLAY)	0000/0001	0000	0000	0000
CMT47	(NO DISPLAY)	0000~0255	0080	0080	0080

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
CMT48	(NO DISPLAY)	0000/0001	0000	0000	0000
CMT49	(NO DISPLAY)	0000/0001	0001	0001	0001
CMT50	(NO DISPLAY)	0000~0031	0021	0021	0021
CMT51	(NO DISPLAY)	0000~0031	0021	0021	0021
CMT52	(NO DISPLAY)	0000/0001	0000	0000	0000
CMT53	(NO DISPLAY)	0000/0001	0000	0000	0000
CMT54	(NO DISPLAY)	0000~0003	0000	0000	0000
CMT55	(NO DISPLAY)	0000/0001	0000	0000	0000
CMT56	(NO DISPLAY)	0000/0001	0001	0001	0001
CMT57	(NO DISPLAY)	0000/0001	0000	0000	0000

#### 4.6.4 [7.VNR] (\*All fixed)

##### NOTE:

For reference, initial setting values in the following conditions are written here.

- Input signal : PAL/SECAM/NTSC
- Picture mode : Standard
- Zoom : Full
- Multi screen : Single screen
- Colour temp. : Normal

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
1	MYLV	0000~000F	000E	000E	000E
2	ONMVF	0000/0001	0001	0001	0001
3	MYCOR	0000~001F	0003	0003	0003
4	MYGA	0000~0003	0002	0002	0002
5	YEGON	0000/0001	0001	0001	0001
6	Y EGL	0000~000F	0000	0000	0000
7	YLTL	0000~007F	0009	0009	0009
8	MCLV	0000~000F	0008	0008	0008
9	MCGA	0000~0003	0002	0002	0002
10	MCCOR	0000~001F	0003	0003	0003
11	CLTL	0000~007F	0009	0009	0009
12	YNGA	0000~0003	0003	0003	0003
13	COR_OF	0000/0001	0000	0000	0000
14	LPF_OF	0000/0001	0000	0000	0000
15	YCTL	0000~000F	0004	0004	0004
16	YNCL	0000~000F	000E	000E	000E
17	YNCON	0000/0001	0001	0001	0001



#### 4.6.5 [8.IP] (\*All fixed)

##### NOTE:

For reference, initial setting values in the following conditions are written here.

- Input signal : PAL/SECAM/NTSC
- Picture mode : Standard
- Zoom : Full
- Multi screen : Single screen
- Colour temp. : Normal

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
PPA001	(NO DISPLAY)	0000~00FF	0040	0040	0040
PPA002	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPA003	(NO DISPLAY)	0000~00FF	005D	005D	0062
PPA004	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPA005	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPA006	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPA007	(NO DISPLAY)	0000~00FF	005D	005D	0062
PPA008	(NO DISPLAY)	0000~00FF	0031	0031	0023

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
PPB001	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB002	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB003	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB004	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB005	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB006	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB007	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB008	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB009	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB010	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB011	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB012	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB013	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB014	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB015	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB016	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB017	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB018	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB019	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB020	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB021	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB022	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB023	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB024	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB025	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB026	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB027	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB028	(NO DISPLAY)	0000~001F	0000	0000	0000

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
PPB029	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB030	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB031	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB032	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB033	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB034	(NO DISPLAY)	0000~001F	0000	0000	0000
PPB035	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPB036	(NO DISPLAY)	0000~00FF	0000	0000	0000

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
PPC001	(NO DISPLAY)	0000~000F	0000	0000	0000
PPC002	(NO DISPLAY)	0000~00FF	002E	002E	0028
PPC003	(NO DISPLAY)	0000~00FF	0000	0000	0002
PPC004	(NO DISPLAY)	0000~000F	0000	0000	0000
PPC005	(NO DISPLAY)	0000~00FF	007C	007C	007C
PPC006	(NO DISPLAY)	0000~000F	0000	0000	0000
PPC007	(NO DISPLAY)	0000~00FF	0000	0000	0000

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
PPD001	(NO DISPLAY)	0000~000F	006A	006A	006A
PPD002	(NO DISPLAY)	0000~00FF	0002	0002	0002
PPD003	(NO DISPLAY)	0000~00FF	00F6	00F6	00F6
PPD004	(NO DISPLAY)	0000~000F	0002	0002	0002
PPD005	(NO DISPLAY)	0000~00FF	0042	0042	0042
PPD006	(NO DISPLAY)	0000~000F	0000	0000	0000
PPD007	(NO DISPLAY)	0000~00FF	0024	0024	0024
PPD008	(NO DISPLAY)	0000~000F	0001	0001	0001
PPD009	(NO DISPLAY)	0000~00FF	0054	0054	0054
PPD010	(NO DISPLAY)	0000~00FF	0002	0002	0002
PPD011	(NO DISPLAY)	0000~00FF	00F0	00F0	00F0
PPD012	(NO DISPLAY)	0000~00FF	0002	0002	0002
PPD013	(NO DISPLAY)	0000~000F	0034	0034	0034
PPD014	(NO DISPLAY)	0000~00FF	0000	0000	0000
PPD015	(NO DISPLAY)	0000~00FF	0028	0028	0028
PPD016	(NO DISPLAY)	0000~000F	0001	0001	0001

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
ADS001	(NO DISPLAY)	0000~00FF	00D7	00D7	00D7
ADS002	(NO DISPLAY)	0000~000F	000F	000F	000F
ADS003	(NO DISPLAY)	0000~0003	0001	0001	0001
ADS004	(NO DISPLAY)	0000~0007	0005	0005	0005
ADS005	(NO DISPLAY)	0000~001F	0016	0016	0016
ADS006	(NO DISPLAY)	0000~00FF	0028	0028	0028

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
ADS007	(NO DISPLAY)	0000~00FF	0096	0096	0096
ADS008	(NO DISPLAY)	0000~00FF	0020	0020	0020
ADS009	(NO DISPLAY)	0000~00FF	00FF	00FF	00FF
ADS010	(NO DISPLAY)	0000~00FF	00FF	00FF	00FF
ADS011	(NO DISPLAY)	0000~00FF	00FF	00FF	00FF
ADS012	(NO DISPLAY)	0000~007F	003C	003C	003C
ADS013	(NO DISPLAY)	0000~007F	004D	004D	004D
ADS014	(NO DISPLAY)	0000~007F	0040	0040	0040
ADS015	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS016	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS017	(NO DISPLAY)	0000/0001	0000	0000	0000
ADS018	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS019	(NO DISPLAY)	0000/0001	0000	0000	0000
ADS020	(NO DISPLAY)	0000/0001	0000	0000	0000
ADS021	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS022	(NO DISPLAY)	0000/0001	0000	0000	0000
ADS023	(NO DISPLAY)	0000/0001	0000	0000	0000
ADS024	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS025	(NO DISPLAY)	0000/0001	0000	0000	0000
ADS026	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS027	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS028	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS029	(NO DISPLAY)	0000/0001	0000	0000	0000
ADS030	(NO DISPLAY)	0000~001F	0003	0003	0003
ADS031	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS032	(NO DISPLAY)	0000/0001	0000	0000	0000
ADS033	(NO DISPLAY)	0000/0001	0001	0001	0001
ADS034	(NO DISPLAY)	0000~00FF	0032	0032	0032

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
IPA001	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA002	(NO DISPLAY)	0000~003F	0022	0022	0015
IPA003	(NO DISPLAY)	0000~003F	0022	0022	0010
IPA004	(NO DISPLAY)	0000~003F	0022	0022	0015
IPA005	(NO DISPLAY)	0000~0003	0000	0000	0001
IPA006	(NO DISPLAY)	0000~0003	0000	0000	0001
IPA007	(NO DISPLAY)	0000~000F	000F	000F	0008
IPA008	(NO DISPLAY)	0000~003F	0008	0008	0003
IPA009	(NO DISPLAY)	0000~003F	0005	0005	0000
IPA010	(NO DISPLAY)	0000~003F	0019	0019	0019
IPA011	(NO DISPLAY)	0000~003F	0015	0015	0017
IPA012	(NO DISPLAY)	0000~003F	0022	0022	0024
IPA013	(NO DISPLAY)	0000~0003	0001	0001	0000
IPA014	(NO DISPLAY)	0000~0003	0001	0001	0000
IPA015	(NO DISPLAY)	0000~000F	000F	000F	000F

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
IPA016	(NO DISPLAY)	0000~003F	0003	0003	0006
IPA017	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA018	(NO DISPLAY)	0000~003F	000D	000D	002A
IPA019	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA020	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA021	(NO DISPLAY)	0000~003F	0030	0030	0015
IPA022	(NO DISPLAY)	0000~0003	0001	0001	0000
IPA023	(NO DISPLAY)	0000~003F	000A	000A	0004
IPA024	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA025	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA026	(NO DISPLAY)	0000~003F	0030	0030	0015
IPA027	(NO DISPLAY)	0000~0003	0001	0001	0000
IPA028	(NO DISPLAY)	0000~003F	000A	000A	0005
IPA029	(NO DISPLAY)	0000~003F	0000	0000	0000
IPA030	(NO DISPLAY)	0000~000F	0000	0000	0000
IPA031	(NO DISPLAY)	0000~0007	0000	0000	0000
IPA032	(NO DISPLAY)	0000~003F	0000	0000	0000
IPA033	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA034	(NO DISPLAY)	0000~003F	0000	0000	0000
IPA035	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA036	(NO DISPLAY)	0000~003F	000D	000D	000D
IPA037	(NO DISPLAY)	0000~003F	000D	000D	000D
IPA038	(NO DISPLAY)	0000~003F	0010	0010	0010
IPA039	(NO DISPLAY)	0000~0003	0001	0001	0001
IPA040	(NO DISPLAY)	0000~0003	0001	0001	0001
IPA041	(NO DISPLAY)	0000~000F	000F	000F	000F
IPA042	(NO DISPLAY)	0000~003F	0005	0005	0005
IPA043	(NO DISPLAY)	0000~003F	0008	0008	0008
IPA044	(NO DISPLAY)	0000~003F	0020	0020	0020
IPA045	(NO DISPLAY)	0000~003F	0020	0020	0020
IPA046	(NO DISPLAY)	0000~003F	0020	0020	0020
IPA047	(NO DISPLAY)	0000~0003	0002	0002	0002
IPA048	(NO DISPLAY)	0000~0003	0002	0002	0002
IPA049	(NO DISPLAY)	0000~000F	0007	0007	0007
IPA050	(NO DISPLAY)	0000~003F	0008	0008	0008
IPA051	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA052	(NO DISPLAY)	0000~003F	0008	0008	0008
IPA053	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA054	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA055	(NO DISPLAY)	0000~003F	0015	0015	0015
IPA056	(NO DISPLAY)	0000~0003	0000	0000	0000
IPA057	(NO DISPLAY)	0000~003F	000A	000A	000A
IPA058	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA059	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA060	(NO DISPLAY)	0000~003F	0015	0015	0015

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
IPA061	(NO DISPLAY)	0000~0003	0000	0000	0000
IPA062	(NO DISPLAY)	0000~003F	000A	000A	000A
IPA063	(NO DISPLAY)	0000~003F	003F	003F	003F
IPA064	(NO DISPLAY)	0000~000F	0006	0006	0006
IPA065	(NO DISPLAY)	0000~0007	0001	0001	0001
IPA066	(NO DISPLAY)	0000~003F	0008	0008	0008
IPA067	(NO DISPLAY)	0000/0001	0001	0001	0001
IPA068	(NO DISPLAY)	0000~003F	0027	0027	0027
IPA069	(NO DISPLAY)	0000~0003	0000	0000	0000
IPA070	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPA071	(NO DISPLAY)	0000~000F	0005	0005	0005
IPA072	(NO DISPLAY)	0000~00FF	00DB	00DB	00DB
IPA073	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA074	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA075	(NO DISPLAY)	0000~00FF	0018	0018	0016
IPA076	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA077	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA078	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA079	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA080	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA081	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA082	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA083	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA084	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA085	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA086	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA087	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA088	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA089	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA090	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA091	(NO DISPLAY)	0000~000F	0000	0000	0000
IPA092	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPA093	(NO DISPLAY)	0000~000F	000F	000F	000F
IPA094	(NO DISPLAY)	0000~00FF	00FF	00FF	00FF
IPA095	(NO DISPLAY)	0000~000F	0000	0000	0000
IPA096	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPA097	(NO DISPLAY)	0000~000F	000F	000F	000F
IPA098	(NO DISPLAY)	0000~00FF	00FF	00FF	00FF
IPA099	(NO DISPLAY)	0000~000F	0000	0000	0000
IPA100	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPA101	(NO DISPLAY)	0000~000F	0000	0000	0000
IPA102	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPA103	(NO DISPLAY)	0000~000F	0000	0000	0000
IPA104	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPA105	(NO DISPLAY)	0000~000F	0000	0000	0000

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
IPA106	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPA107	(NO DISPLAY)	0000~000F	0000	0000	0000
IPA108	(NO DISPLAY)	0000~00FF	0080	0080	0080
IPA109	(NO DISPLAY)	0000~000F	0000	0000	0000
IPA110	(NO DISPLAY)	0000~00FF	0040	0040	0040
IPA111	(NO DISPLAY)	0000~000F	0005	0005	0005
IPA112	(NO DISPLAY)	0000~00FF	0040	0040	0040
IPA113	(NO DISPLAY)	0000~000F	0000	0000	0000
IPA114	(NO DISPLAY)	0000~00FF	00C0	00C0	00C0
IPA115	(NO DISPLAY)	0000~000F	0002	0002	0002
IPA116	(NO DISPLAY)	0000~00FF	00EF	00EF	00EF
IPA117	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA118	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA119	(NO DISPLAY)	0000/0001	0000	0000	0000
IPA120	(NO DISPLAY)	0000/0001	0000	0000	0000

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
IPB001	(NO DISPLAY)	0000~00FF	0001	0001	0001
IPB002	(NO DISPLAY)	0000~00FF	0001	0001	0003
IPB003	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB004	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB005	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB006	(NO DISPLAY)	0000~00FF	00EC	00EC	00ED
IPB007	(NO DISPLAY)	0000~000F	0002	0002	0002
IPB008	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB009	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB010	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB011	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB012	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB013	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB014	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB015	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB016	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB017	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB018	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB019	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB020	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB021	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB022	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB023	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB024	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB025	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB026	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB027	(NO DISPLAY)	0000~000F	000F	000F	000F
IPB028	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB029	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB030	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB031	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB032	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB033	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB034	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB035	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB036	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB037	(NO DISPLAY)	0000/0001	0000	0000	0000
IPB038	(NO DISPLAY)	0000~0007	0000	0000	0000
IPB039	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB040	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB041	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB042	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB043	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB044	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB045	(NO DISPLAY)	0000~000F	0001	0001	0001

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
IPB046	(NO DISPLAY)	0000~00FF	008B	008B	008B
IPB047	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB048	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB049	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB050	(NO DISPLAY)	0000~00FF	000F	000F	000F
IPB051	(NO DISPLAY)	0000~000F	0006	0006	0006
IPB052	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB053	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB054	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB055	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB056	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB057	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB058	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB059	(NO DISPLAY)	0000~0007	0000	0000	0000
IPB060	(NO DISPLAY)	0000~0003	0000	0000	0000
IPB061	(NO DISPLAY)	0000~0003	0000	0000	0000
IPB062	(NO DISPLAY)	0000/0001	0000	0000	0000
IPB063	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB064	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB065	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB066	(NO DISPLAY)	0000/0001	00C8	00C8	00C8
IPB067	(NO DISPLAY)	0000~000F	0006	0006	0006
IPB068	(NO DISPLAY)	0000~000F	0040	0040	0040
IPB069	(NO DISPLAY)	0000~000F	0001	0001	0001
IPB070	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB071	(NO DISPLAY)	0000~00FF	0001	0001	0001
IPB072	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB073	(NO DISPLAY)	0000~00FF	0050	0050	0050
IPB074	(NO DISPLAY)	0000/0001	0080	0080	0080
IPB075	(NO DISPLAY)	0000/0001	0080	0080	0080
IPB076	(NO DISPLAY)	0000/0001	0000	0000	0000
IPB077	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB078	(NO DISPLAY)	0000/0001	0000	0000	0000
IPB079	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB080	(NO DISPLAY)	0000~000F	000F	000F	000F
IPB081	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB082	(NO DISPLAY)	0000~000F	0000	0000	0000
IPB083	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPB084	(NO DISPLAY)	0000/0001	0000	0000	0000
IPB085	(NO DISPLAY)	0000/0001	0000	0000	0000
IPB086	(NO DISPLAY)	0000/0001	0000	0000	0000
IPB087	(NO DISPLAY)	0000~000F	000B	000B	000B
IPB088	(NO DISPLAY)	0000/0001	0001	0001	0001



Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
IPC001	(NO DISPLAY)	0000~0003	0002	0002	0002
IPC002	(NO DISPLAY)	0000~00FF	00EA	00EA	00EA
IPC003	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC004	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC005	(NO DISPLAY)	0000~000F	0000	0000	0000
IPC006	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPC007	(NO DISPLAY)	0000~000F	0005	0005	0005
IPC008	(NO DISPLAY)	0000~00FF	00DB	00DB	00DB
IPC009	(NO DISPLAY)	0000~000F	0007	0007	0006
IPC010	(NO DISPLAY)	0000~00FF	00B9	00B9	0071
IPC011	(NO DISPLAY)	0000~000F	0004	0004	0004
IPC012	(NO DISPLAY)	0000~00FF	00CE	00CE	00CE
IPC013	(NO DISPLAY)	0000~0003	0000	0000	0000
IPC014	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC015	(NO DISPLAY)	0000/0001	0001	0001	0001
IPC016	(NO DISPLAY)	0000~00FF	001F	001F	0003
IPC017	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC018	(NO DISPLAY)	0000~007F	0000	0000	0000
IPC019	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC020	(NO DISPLAY)	0000~007F	0001	0001	0001
IPC021	(NO DISPLAY)	0000~000F	0000	0000	0000
IPC022	(NO DISPLAY)	0000~00FF	00FE	00FE	00FE
IPC023	(NO DISPLAY)	0000~0003	0000	0000	0000
IPC024	(NO DISPLAY)	0000~00FF	005C	005C	0040
IPC025	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC026	(NO DISPLAY)	0000~007F	0020	0020	0020
IPC027	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC028	(NO DISPLAY)	0000~007F	0000	0000	0000
IPC029	(NO DISPLAY)	0000/0001	0001	0001	0001
IPC030	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC031	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC032	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC033	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC034	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC035	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC036	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC037	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC038	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC039	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC040	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC041	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC042	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC043	(NO DISPLAY)	0000/0001	0000	0000	0000
IPC044	(NO DISPLAY)	0000/0001	0000	0000	0000

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
IPD001	(NO DISPLAY)	0000~00FF	0040	0040	0040
IPD002	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPD003	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPD004	(NO DISPLAY)	0000~0007	0000	0000	0000
IPD005	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPD006	(NO DISPLAY)	0000~0007	0006	0006	0006
IPD007	(NO DISPLAY)	0000~00FF	0018	0018	0018
IPD008	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD009	(NO DISPLAY)	0000~000F	0001	0001	0001
IPD010	(NO DISPLAY)	0000~00FF	0062	0062	0062
IPD011	(NO DISPLAY)	0000~000F	0005	0005	0005
IPD012	(NO DISPLAY)	0000~00FF	002B	002B	002B
IPD013	(NO DISPLAY)	0000~0007	0000	0000	0000
IPD014	(NO DISPLAY)	0000~0007	0000	0000	0000
IPD015	(NO DISPLAY)	0000/0001	0002	0002	0002
IPD016	(NO DISPLAY)	0000/0001	0002	0002	0002
IPD017	(NO DISPLAY)	0000~00FF	0002	0002	0002
IPD018	(NO DISPLAY)	0000~0007	0002	0002	0002
IPD019	(NO DISPLAY)	0000~00FF	0002	0002	0002
IPD020	(NO DISPLAY)	0000~0007	0002	0002	0002
IPD021	(NO DISPLAY)	0000~00FF	0070	0070	0070
IPD022	(NO DISPLAY)	0000/0001	0080	0080	0080
IPD023	(NO DISPLAY)	0000~000F	0080	0080	0080
IPD024	(NO DISPLAY)	0000~00FF	0070	0070	0070
IPD025	(NO DISPLAY)	0000~000F	0060	0060	0060
IPD026	(NO DISPLAY)	0000~00FF	0050	0050	0050
IPD027	(NO DISPLAY)	0000~00FF	0040	0040	0040
IPD028	(NO DISPLAY)	0000~0007	0000	0000	0000
IPD029	(NO DISPLAY)	0000~0007	0000	0000	0000
IPD030	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD031	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD032	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPD033	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD034	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD035	(NO DISPLAY)	0000~0003	0000	0000	0000
IPD036	(NO DISPLAY)	0000~000F	0000	0000	0000
IPD037	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPD038	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPD039	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD040	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD041	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD042	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD043	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD044	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD045	(NO DISPLAY)	0000/0001	0000	0000	0000

Item No.	Item	Variable range	Setting value		
			PAL	SECAM	NTSC
IPD046	(NO DISPLAY)	0000/0001	0000	0000	0000
IPD047	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPD048	(NO DISPLAY)	0000~00FF	0000	0000	0000
IPD049	(NO DISPLAY)	0000~00FF	0090	0090	0090
IPD050	(NO DISPLAY)	0000~0007	0000	0000	0000
IPD051	(NO DISPLAY)	0000~00FF	001D	001D	001D
IPD052	(NO DISPLAY)	0000~0007	0002	0002	0002
IPD053	(NO DISPLAY)	0000~00FF	00E6	00E6	00E6
IPD054	(NO DISPLAY)	0000/0001	0001	0001	0001
IPD055	(NO DISPLAY)	0000~000F	0001	0001	0001
IPD056	(NO DISPLAY)	0000~00FF	000E	000E	000E
IPD057	(NO DISPLAY)	0000~000F	0004	0004	0004
IPD058	(NO DISPLAY)	0000~00FF	00C0	00C0	00C0

## 4.7 ADJUSTMENT PROCEDURE

### 4.7.1 CHECK ITEM

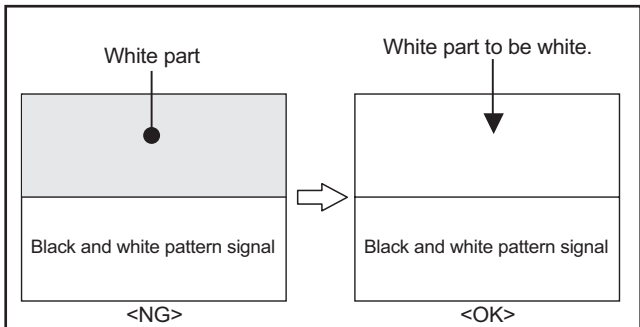
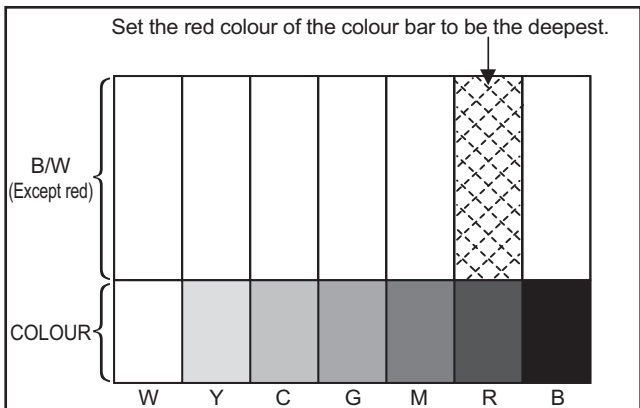
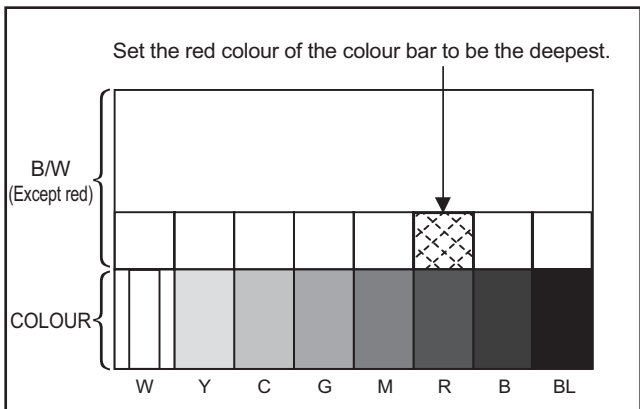
Item	Measuring instrument	Test point	Adjustment part	Description
<b>VCO (AFC) check</b>	Remote control unit Signal generator		[1.IF] 1.VCO(CW)	(1) Receive a PAL colour bar signal. (2) Select "1. IF" from the SERVICE MENU. (3) Select "1. VCO." (4) Make sure that an arrow of "MAIN" is in the position between "ABOVE REF." and "BELOW REF." on the screen (5) Make sure that an arrow of "SUB" is in the position between "ABOVE REF." and "BELOW REF." on the screen.

Fig.3

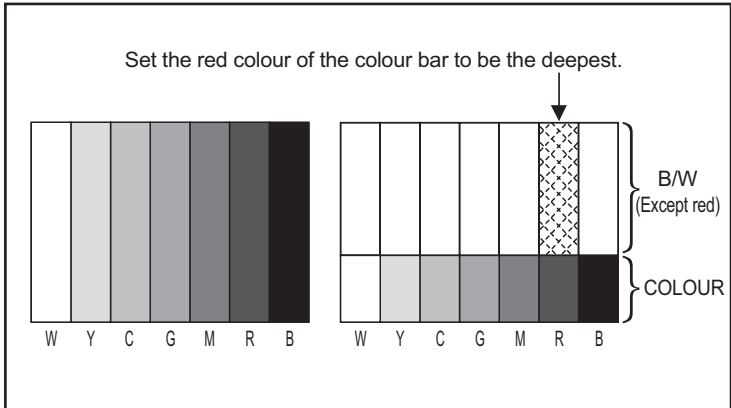
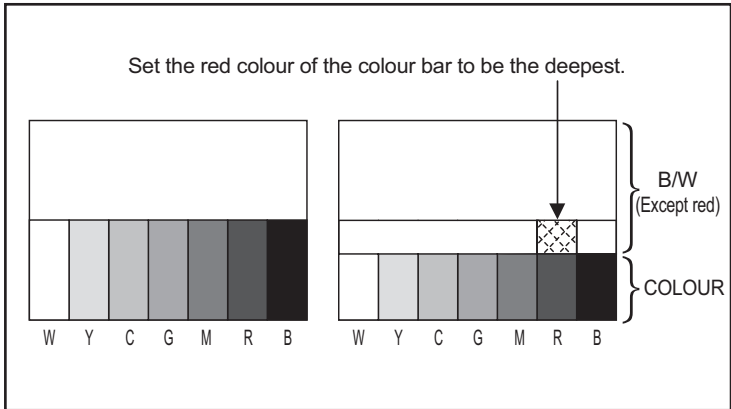
### 4.7.2 VIDEO CIRCUIT

Item	Measuring instrument	Test point	Adjustment part	Description
<b>SUB BRIGHTNESS</b>	Remote control unit Signal generator		[2.V/C] 9. BRIGHT (Bright)	(1) Receive a PAL black and white pattern signal (including 0% black signal). (2) Select "2. V/C" from the SERVICE MENU. (3) Adjust < 9. BRIGHT > (Bright) to set the 0% black part to be the brightest. (4) Press the [OK] key to memorize the set value.

Fig.4

Item	Measuring instrument	Test point	Adjustment part	Description
<b>SUB CONTRAST</b>	Remote control unit		[2. V/C] 10. CONT (Contrast)	(1) Receive a PAL black and white pattern signal (colour off). (2) Select "2. V/C" from the SERVICE MENU. (3) Adjust < 10. CONT > (Contrast) to set the white part to be white. (4) Press the [OK] key to memorize the set value.
	Signal generator			
<div><div><div><div>White part</div><div></div></div><div>Fig.5</div></div></div>				
<b>PAL/SECAM/NTSC SUB COLOUR</b>	Remote control unit		[2.V/C] 13. COLOUR (Colour)	<b>- PAL COLOUR -</b> (1) Receive a PAL colour bar signal (full field colour bar). (2) Select "2. V/C" from the SERVICE MENU. (3) Adjust < 13. COLOUR > (Colour) to set the red colour of the colour bar signal to be the reddest. (See Fig.6) If noise is not completely deleted, adjust < 13. COLOUR > so that the red colour has the minimum noise. <b>NOTE:</b> If you select an adjustment item < 13. COLOUR >, then the screen turns to an adjustment screen shown in Fig.6. (4) Press the [OK] key to memorize the set value. (5) Press the [INFORMATION] key twice to the normal screen.  <b>- SECAM COLOUR -</b> (1) Receive a SECAM colour bar signal (half colour bar). (2) Select "2. V/C" from the SERVICE MENU. (3) Make similar adjustment of SECAM COLOUR in the same way as for "PAL COLOUR". (See Fig.7)
	Signal generator			
<div><div><div><div>Set the red colour of the colour bar to be the deepest.</div><div></div></div><div>Fig.6</div></div></div>				
<div><div><div><div>Set the red colour of the colour bar to be the deepest.</div><div></div></div><div>Fig.7</div></div></div>				<b>- NTSC COLOUR -</b> (1) Input a NTSC 3.58 composite colour bar signal (full field colour bar 75% white). (2) Select "2. V/C" from the SERVICE MENU. (3) Make similar adjustment of NTSC COLOUR in the same way as for "PAL COLOUR". (See Fig.6) (4) Input a NTSC 4.43 composite colour bar signal (full field colour bar 75% white), and then check the red colour of the colour bar signal and confirm that there is no noise or the minimum noise.

Item	Measuring instrument	Test point	Adjustment part	Description
<b>SUB-SCREEN BRIGHTNESS</b>	Remote control unit  Signal generator		[2. V/C] 11. TWN BRG (Sub-screen bright)	<p>(1) Receive a PAL black and white pattern signal (including 0% black signal).</p> <p>(2) Select "2. V/C" from the SERVICE MENU.</p> <p>(3) Adjust &lt; 11. TWN BRG &gt; (Sub-screen bright) to set the 0% black part in the sub (right) screen to be the brightest.</p> <p><b>NOTE:</b> If you select an adjustment item &lt; 11.TWN BRG &gt;, then the screen automatically turns to twin pictures mode.</p> <p>(4) Press the [OK] key to memorize the set value.</p>
<p>Fig.8</p>				
<b>SUB-SCREEN A-D OFFSET</b>	Remote control unit  Signal generator		[2. V/C] 7. TWN HI R (Sub-screen high light red) 8. TWN HI B (Sub-screen high light blue)	<p>(1) Receive a PAL black and white pattern signal (including 0% black signal).</p> <p>(2) Select "2. V/C" from the SERVICE MENU.</p> <p>(3) Adjust &lt; 7.TWN HI R &gt; (Sub-screen high light red) to minimize the red noise in the upper half of the sub (right) screen. (See Fig.9)</p> <p><b>NOTE:</b> If you select an adjustment item &lt; 7. TWN HI R &gt;, then the screen automatically turns to twin pictures mode.</p> <p>(4) Press the [OK] key to memorize the set value.</p> <p>(5) Adjust &lt; 8.TWN HI B &gt; (Sub-screen high light blue) to minimize the blue noise in the upper half of the sub (right) screen. (See Fig.9)</p> <p>(6) Press the [OK] key to memorize the set value.</p>
<p>Fig.9</p>				
<b>SUB-SCREEN CONTRAST</b>	Remote control unit  Signal generator		[2. V/C] 12. TWN CNT (Sub-screen contrast)	<p>(1) Receive a PAL black and white pattern signal (colour off).</p> <p>(2) Select "2. V/C" from the SERVICE MENU.</p> <p>(3) Adjust &lt; 12. TWN CNT &gt; (Sub-screen contrast) to set the white part in the sub (right) screen to be white.</p> <p><b>NOTE:</b> If you select an adjustment item &lt; 12.TWN CNT &gt;, then the screen automatically turns to twin pictures mode.</p> <p>(4) Press the [OK] key to memorize the set value.</p>
<p>Fig.10</p>				

Item	Measuring instrument	Test point	Adjustment part	Description
<b>PAL/SECAM/NTSC SUB-SCREEN COLOUR</b>	Remote control unit Signal generator		[2. V/C] 16. TWN COL (Sub-screen colour)	<p><b>- SUB-SCREEN PAL COLOUR -</b></p> <ol style="list-style-type: none"> <li>(1) Receive a PAL colour bar signal (full field colour bar).</li> <li>(2) Select "2. V/C" from the SERVICE MENU.</li> <li>(3) Adjust &lt; 16. TWN COL &gt; (Sub-screen colour) to set the red colour of the colour bar signal in the sub screen to be the reddest. (See Fig.11) If noise is not completely deleted, adjust &lt; 16. TWN COL &gt; so that the red colour has the minimum noise.</li> </ol> <p><b>NOTE:</b> If you select an adjustment item &lt; 16.TWN COL &gt;, then the screen automatically turns to twin pictures mode.</p> <ol style="list-style-type: none"> <li>(4) Press the [OK] key to memorize the set value.</li> <li>(5) Press the [INFORMATION] key twice to the normal screen.</li> </ol> <p><b>- SUB-SCREEN SECAM COLOUR -</b></p> <ol style="list-style-type: none"> <li>(1) Receive a SECAM colour bar signal (half colour bar).</li> <li>(2) Select "2. V/C" from the SERVICE MENU.</li> <li>(3) Make similar adjustment of SECAM COLOUR in the same way as for "SUB-SCREEN PAL COLOUR". (See Fig.12)</li> </ol> <p><b>- SUB-SCREEN NTSC COLOUR -</b></p> <ol style="list-style-type: none"> <li>(1) Input a NTSC 3.58 composite colour bar signal (full field colour bar 75% white).</li> <li>(2) Select "2. V/C" from the SERVICE MENU.</li> <li>(3) Make similar adjustment of NTSC COLOUR in the same way as for "SUB-SCREEN PAL COLOUR". (See Fig.11)</li> <li>(4) Input a NTSC 4.43 composite colour bar signal (full field colour bar 75% white), and then check the red colour of the colour bar signal and confirm that there is no noise or the minimum noise.</li> </ol>
<div style="text-align: center;">  <p>Fig.11</p> </div>				
<div style="text-align: center;">  <p>Fig.12</p> </div>				
<b>WHITE BALANCE (HIGH LIGHT)</b>	Remote control unit Signal generator		[2. V/C] S13: R GAIN S15: G GAIN S17: B GAIN	<ol style="list-style-type: none"> <li>(1) Receive a PAL 75% all-white signal.</li> <li>(2) Set colour temperature to "NORMAL."</li> <li>(3) Select "2. V/C" from the SERVICE MENU.</li> <li>(4) Fix one of &lt; S13 &gt; (R GAIN), &lt; S15 &gt; (G GAIN), or &lt; S17 &gt; (B GAIN). Then, lower the other two that are not fixed so that the all-white screen is equally white throughout.</li> </ol> <p><b>NOTE:</b> Set one or more of &lt; S13 &gt;, &lt; S15 &gt;, and &lt; S17 &gt; to 255.</p> <ol style="list-style-type: none"> <li>(5) Check that white balance is properly tracked from low light to high light. If the white balance tracking is deviated, adjust to correct it.</li> <li>(6) Press the [OK] key to memorize the set value.</li> </ol>

## **SECTION 5**

### **TROUBLESHOOTING**

This service manual does not describe TROUBLESHOOTING.





VICTOR COMPANY OF JAPAN, LIMITED  
AV & MULTIMEDIA COMPANY VIDEO DISPLAY CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YA015)



Printed in Japan  
WPC

# JVC

## SCHEMATIC DIAGRAMS

WIDE LCD PANEL TELEVISION

**LT-32C31BJE, LT-32C31BUE,  
LT-32C31SJE, LT-32C31SUE**

CD-ROM No.SML200403

BASIC CHASSIS

MK



InterArt  
**D.I.S.T.**  
Digital Image Scaling Technology  
**T-V LINK**




# LT-32C31BJE, LT-32C31BUE LT-32C31SJE, LT-32C31SUE

## STANDARD CIRCUIT DIAGRAM

### ■ NOTE ON USING CIRCUIT DIAGRAMS

#### 1.SAFETY

The components identified by the  symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

#### 2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

- (1)Input signal : Colour bar signal
- (2)Setting positions of each knob/button and variable resistor : Original setting position when shipped
- (3)Internal resistance of tester : DC 20k $\Omega$  /V
- (4)Oscilloscope sweeping time : H  $\Rightarrow$  20 $\mu$ s / div  
: V  $\Rightarrow$  5ms / div  
: Others  $\Rightarrow$  Sweeping time is specified
- (5)Voltage values : All DC voltage values

\* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

#### 3.INDICATION OF PARTS SYMBOL [EXAMPLE]

- In the PW board : R1209  $\rightarrow$  R209

#### 4.INDICATIONS ON THE CIRCUIT DIAGRAM

##### (1)Resistors

- Resistance value

No unit	: [ $\Omega$ ]
K	: [ k $\Omega$ ]
M	: [ M $\Omega$ ]

- Rated allowable power

No indication	: 1/16 [W]
Others	: As specified

- Type

No indication	: Carbon resistor
OMR	: Oxide metal film resistor
MFR	: Metal film resistor
MPR	: Metal plate resistor
UNFR	: Uninflamable resistor
FR	: Fusible resistor

\* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

##### (2)Capacitors

- Capacitance value

1 or higher	: [pF]
less than 1	: [ $\mu$ F]

- Withstand voltage

No indication	: DC50[V]
Others	: DC withstand voltage [V]
AC indicated	: AC withstand voltage [V]

\* Electrolytic Capacitors

47/50[Example]: Capacitance value [ $\mu$ F]/withstand voltage[V]

- Type

No indication	: Ceramic capacitor
MM	: Metalized mylar capacitor
PP	: Polypropylene capacitor
MPP	: Metalized polypropylene capacitor
MF	: Metalized film capacitor
TF	: Thin film capacitor
BP	: Bipolar electrolytic capacitor
TAN	: Tantalum capacitor

##### (3)Coils

No unit	: [ $\mu$ H]
Others	: As specified

##### (4)Power Supply

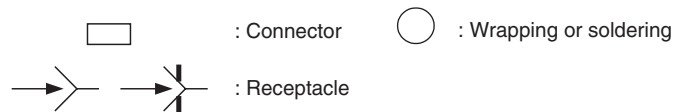


\* Respective voltage values are indicated

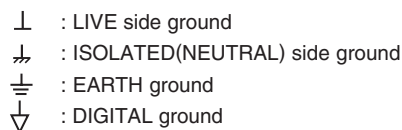
##### (5)Test point





##### (6)Connecting method



##### (7)Ground symbol



#### 5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (  ) side GND and the ISOLATED(NEUTRAL) : (  ) side GND. Therefore, care must be taken for the following points.

- (1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. if the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.
- (2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus measure with a measuring apparatus ( oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◆ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

##### NOTE

◆ Due improvement in performance, some part numbers show in the circuit diagram may not agree with those indicated in the part list.  
When ordering parts, please use the numbers that appear in the Parts List.

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USING P.W. BOARD

TUNER P.W. BOARD	SMK0R602A-U2
MSP P.W. BOARD	SMK0A602A-U2
RECEIVER P.W. BOARD	SMK0J602A-U2
VIDEO P.W. BOARD	SMK-1602A-U2
MI-COM & DIST P.W. BOARD	SMK-0Z602A
POWER P.W. BOARD	SMK-9603A-U2
REGULATOR P.W. BOARD	SMK-9613A-U2
FRONT CONTROL P.W. BOARD	SMK0L601A-U2
FRONT SENSOR P.W. BOARD	SMK0L602A-U2

SEMICONDUCTOR SHAPES

TRANSISTOR

BOTTOM VIEW	FRONT VIEW				TOP VIEW
					CHIP TR 

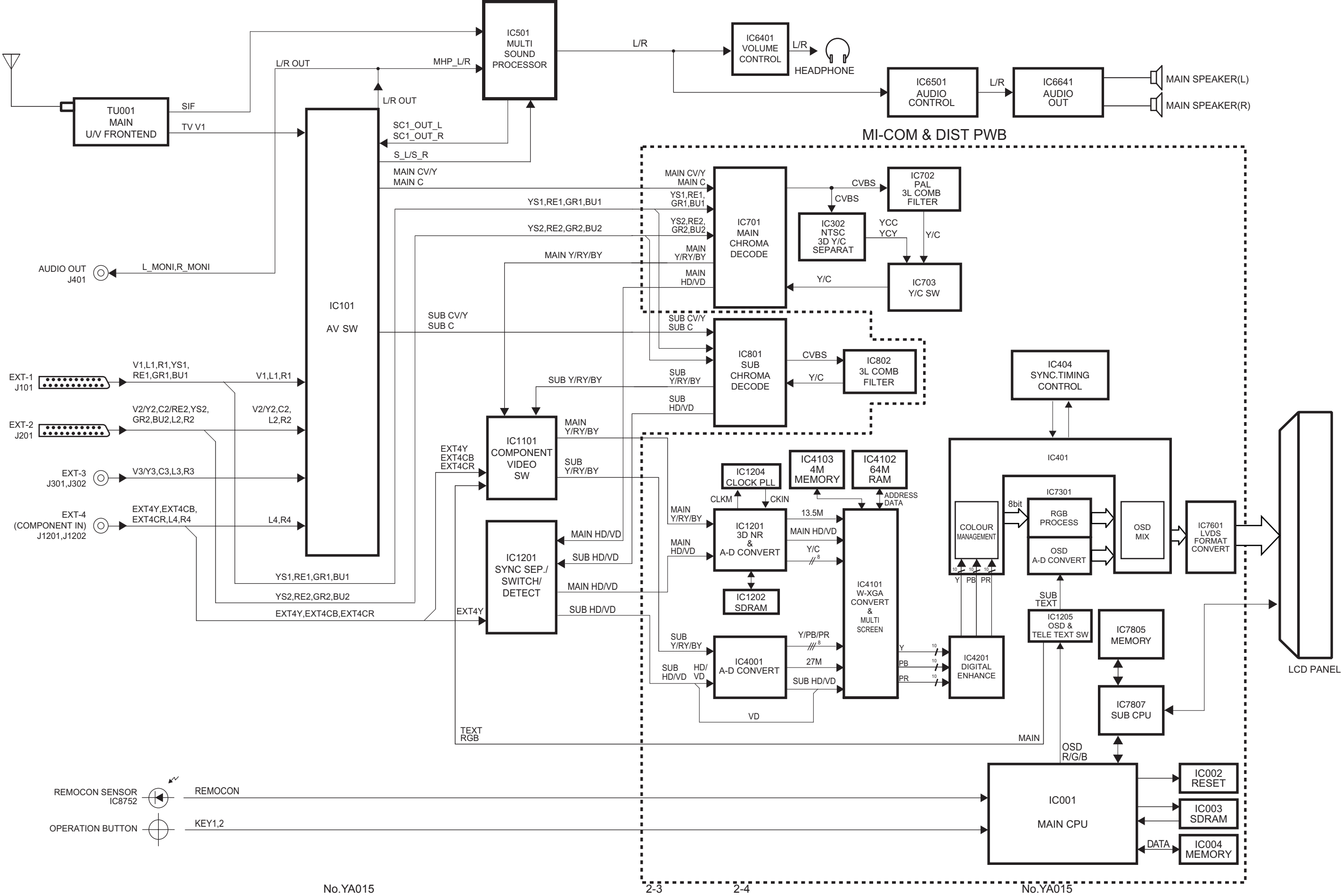
IC

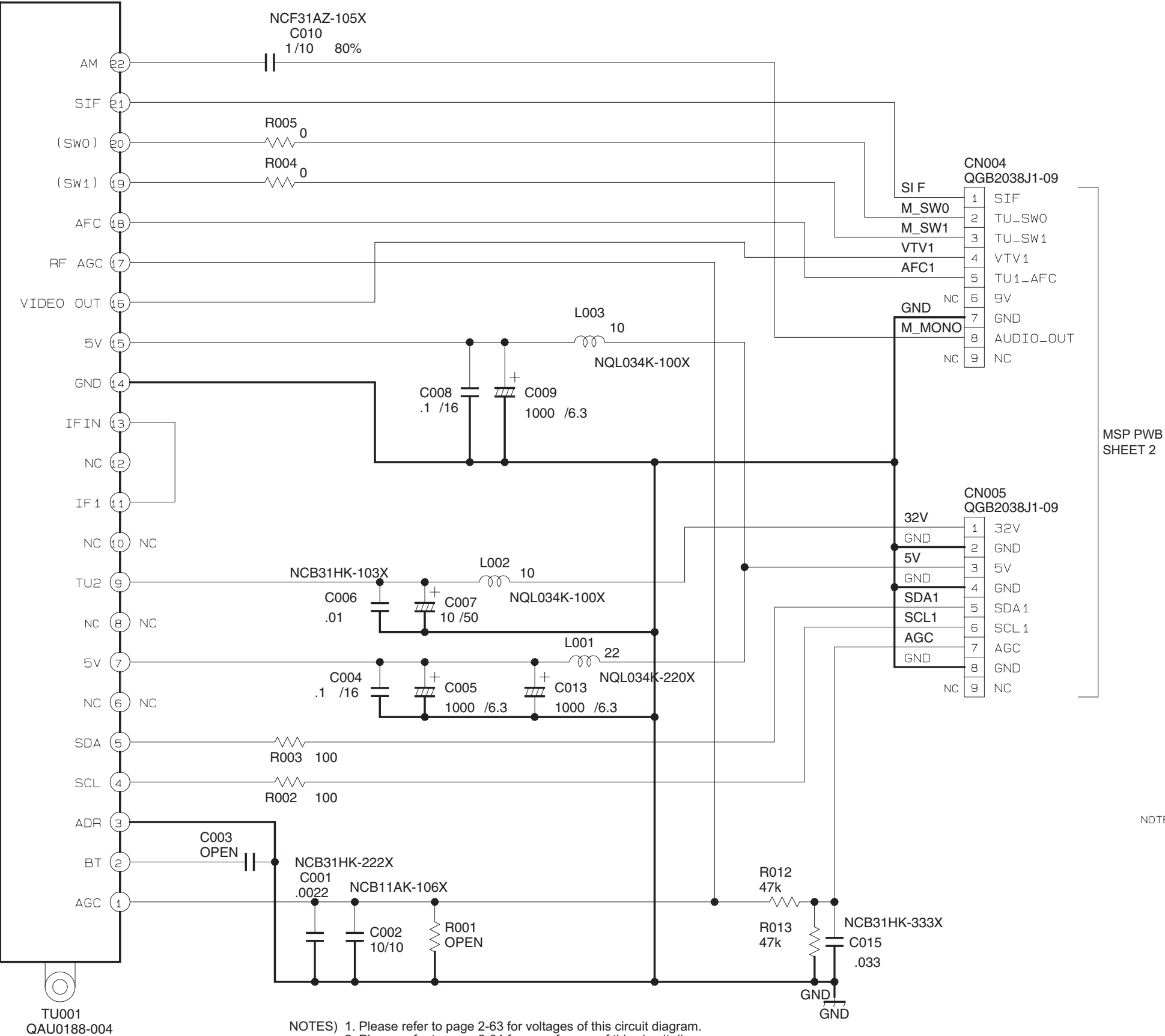
BOTTOM VIEW	FRONT VIEW			TOP VIEW

CHIP IC

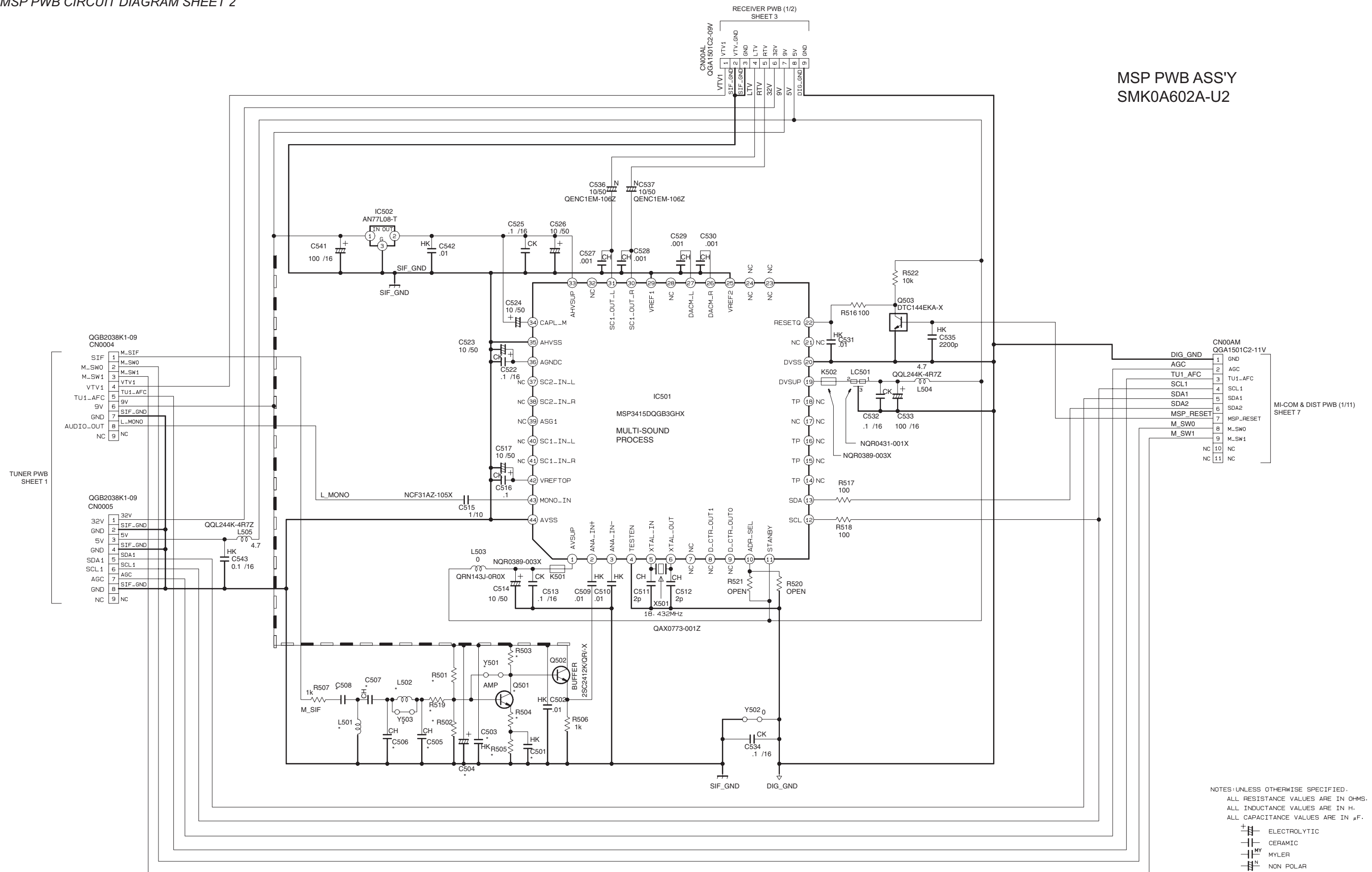
TOP VIEW		

BLOCK DIAGRAM









MSP PWB ASS'Y  
SMK0A602A-U2



NOTES: UNLESS OTHERWISE SPECIFIED.  
ALL RESISTANCE VALUES ARE IN OHMS.  
ALL INDUCTANCE VALUES ARE IN H.  
ALL CAPACITANCE VALUES ARE IN  $\mu$ F.

	ELECTROLYTIC
	CERAMIC
	MYLER
	NON POLAR

NOTES) 1. Please refer to page 2-63 for voltages of this circuit diagram.

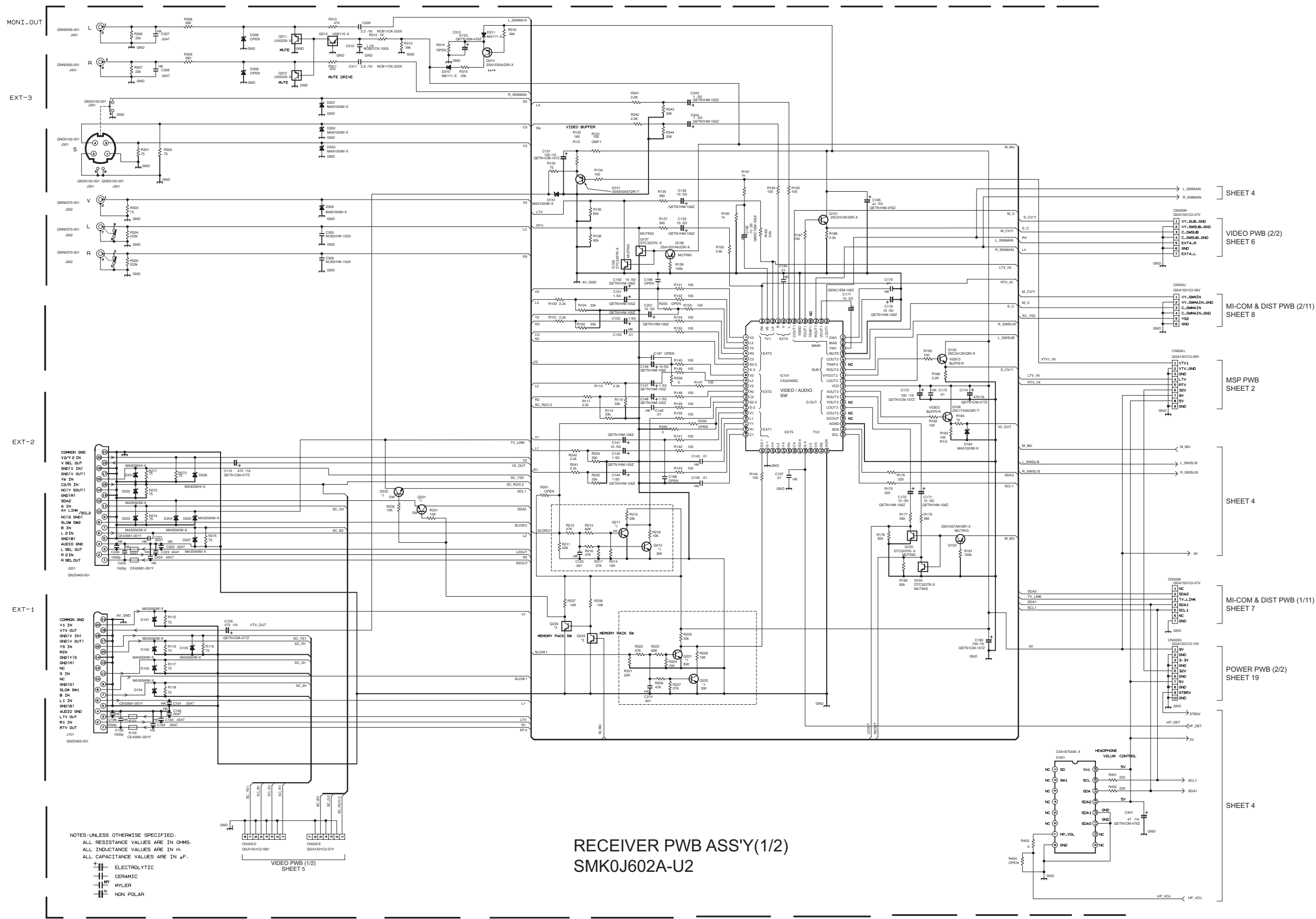
No.YA015

2-7

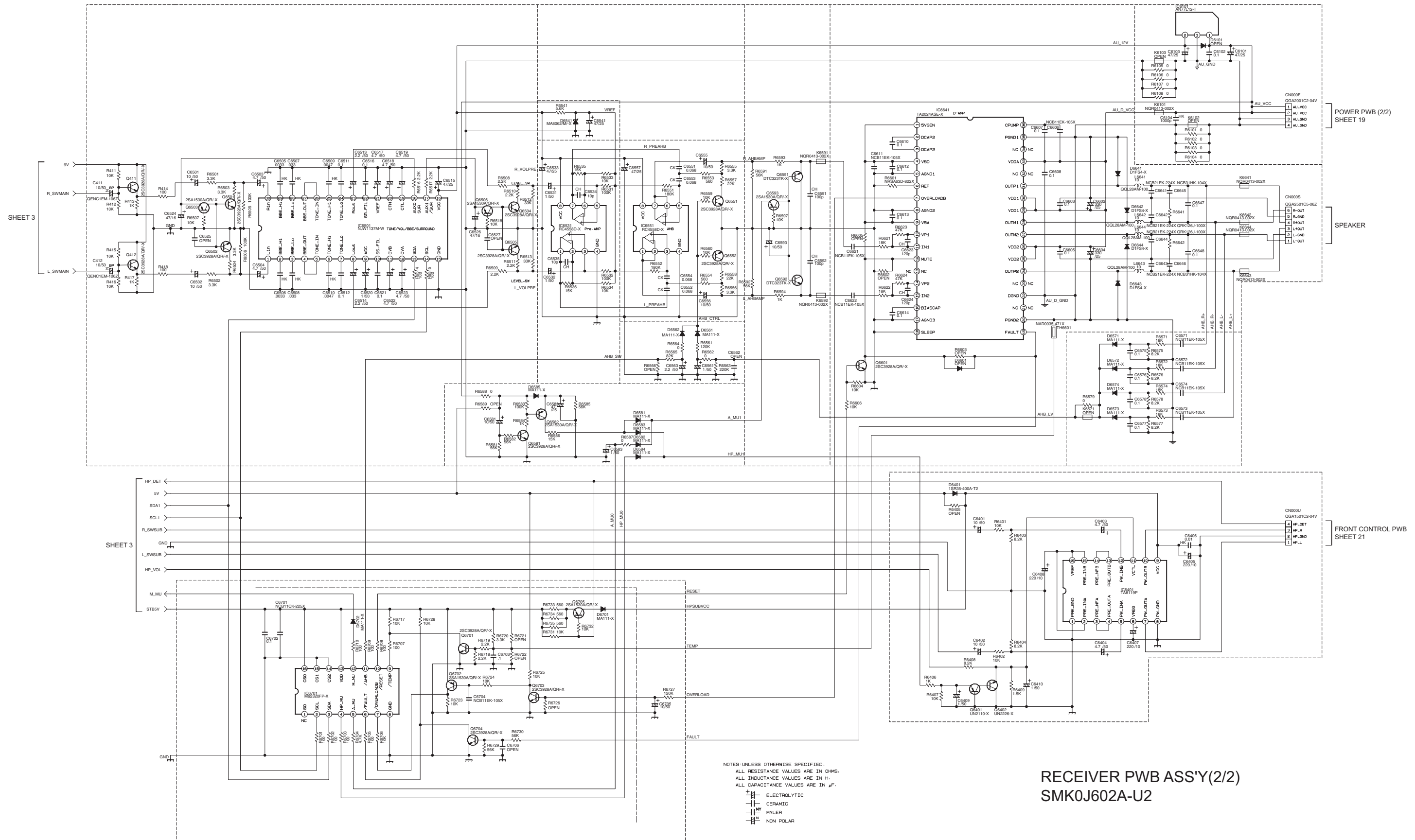
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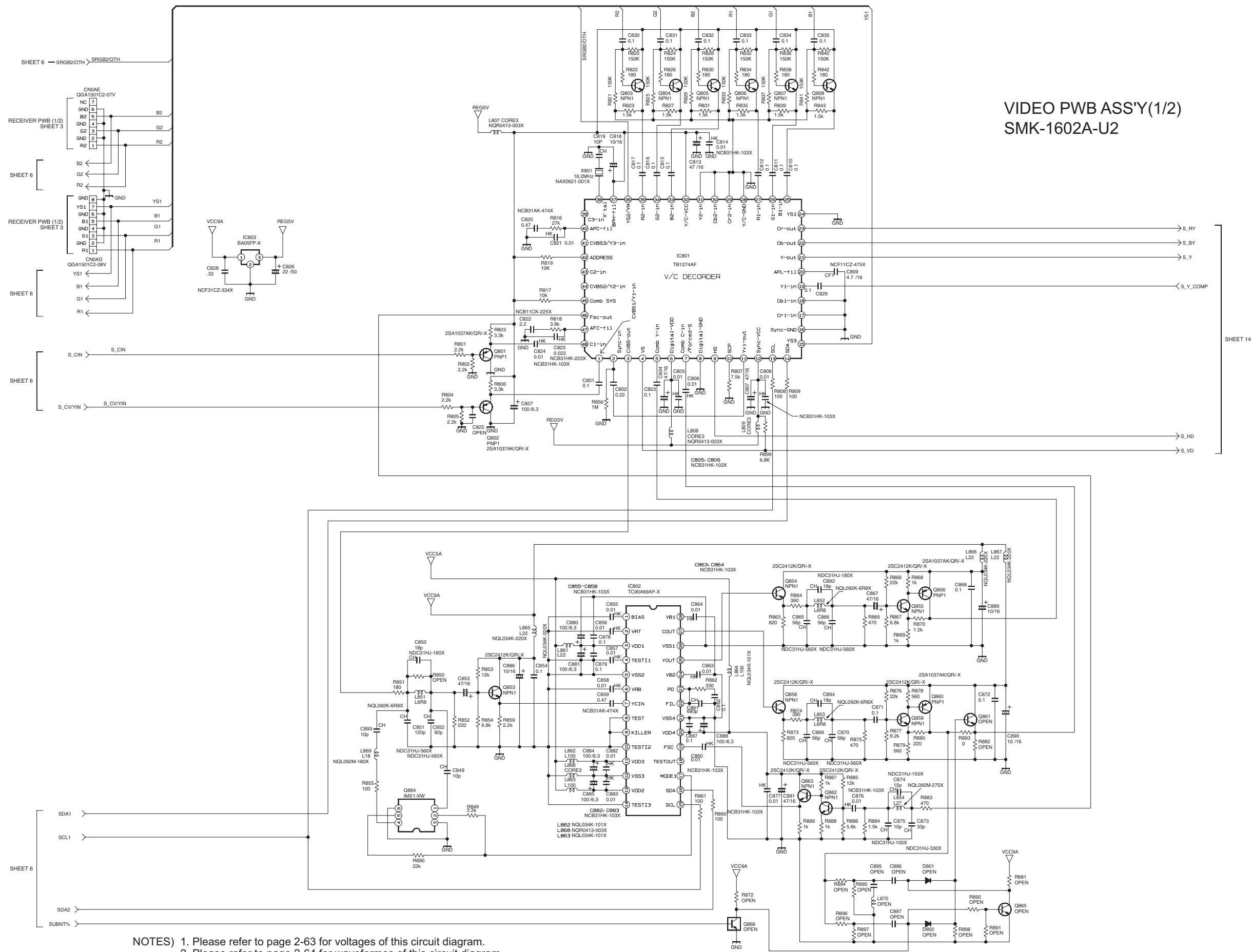
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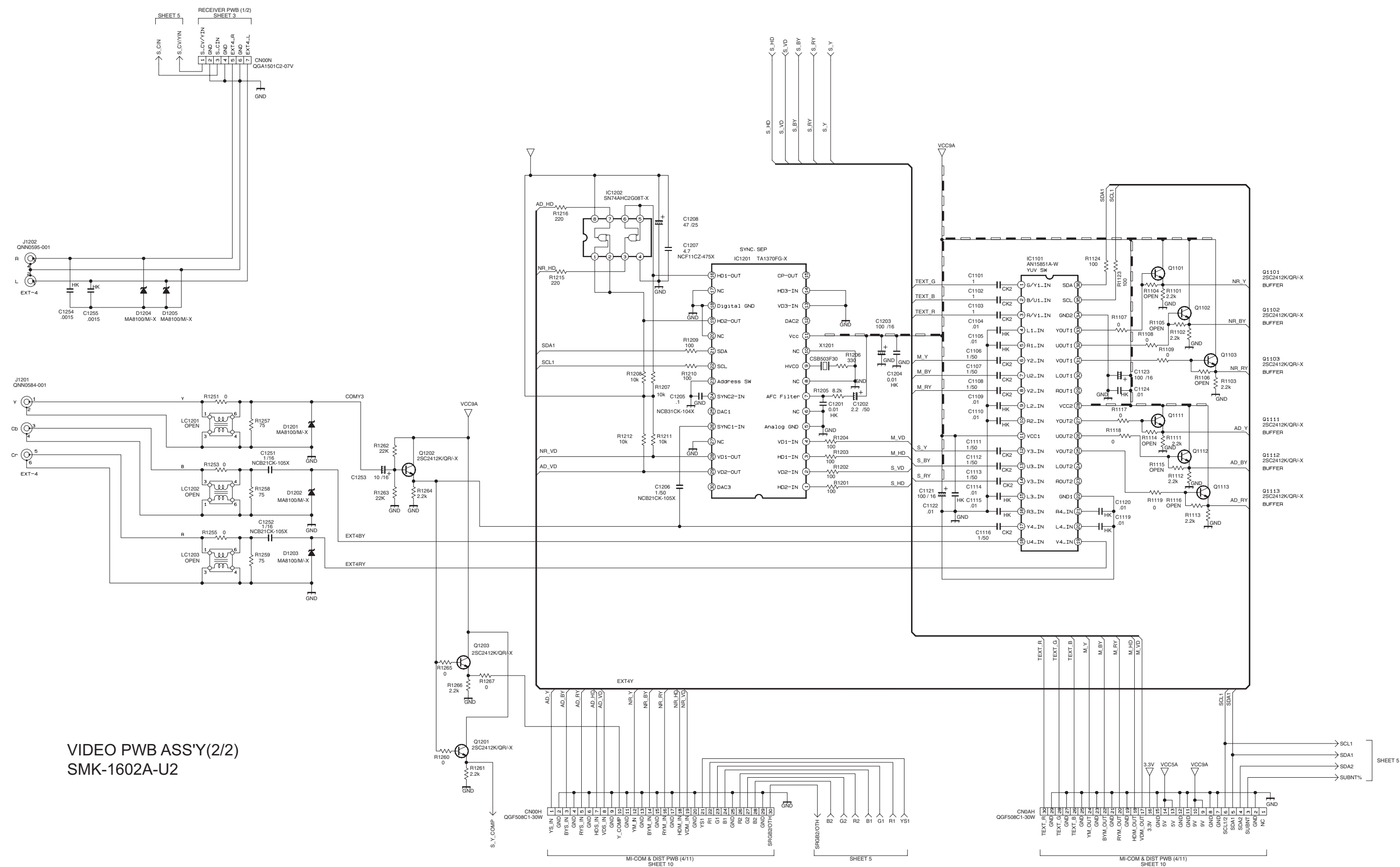




NOTES) 1. Please refer to page 2-63 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.

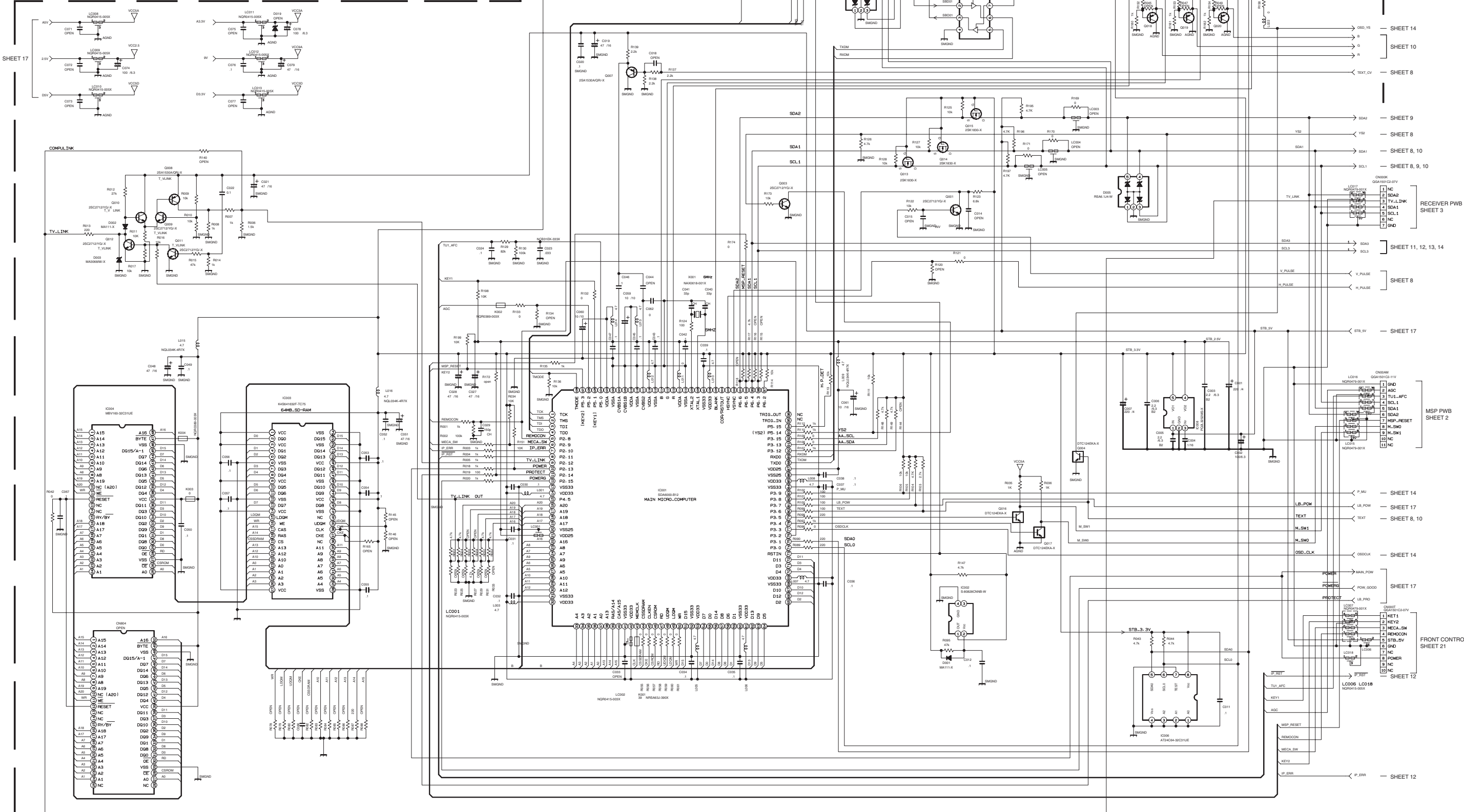




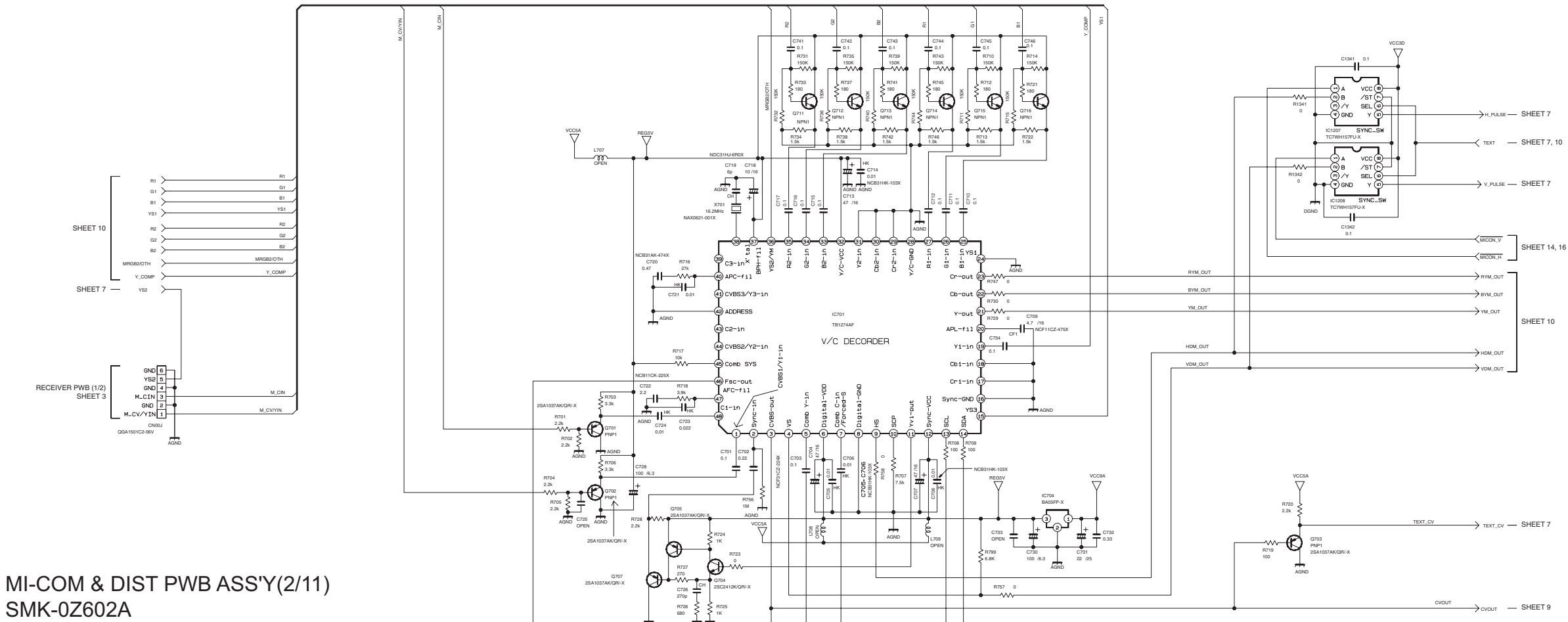


NOTES) 1. Please refer to page 2-63 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.

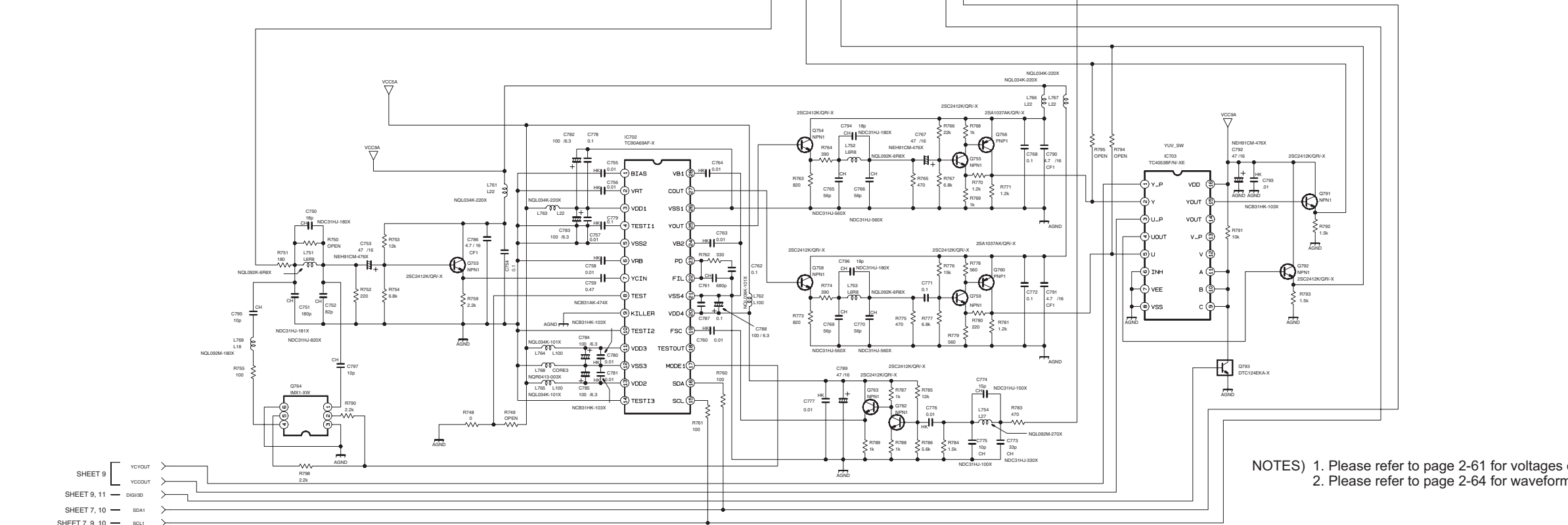
MI-COM & DIST PWB ASS'Y(1/11)  
SMK-0Z602A



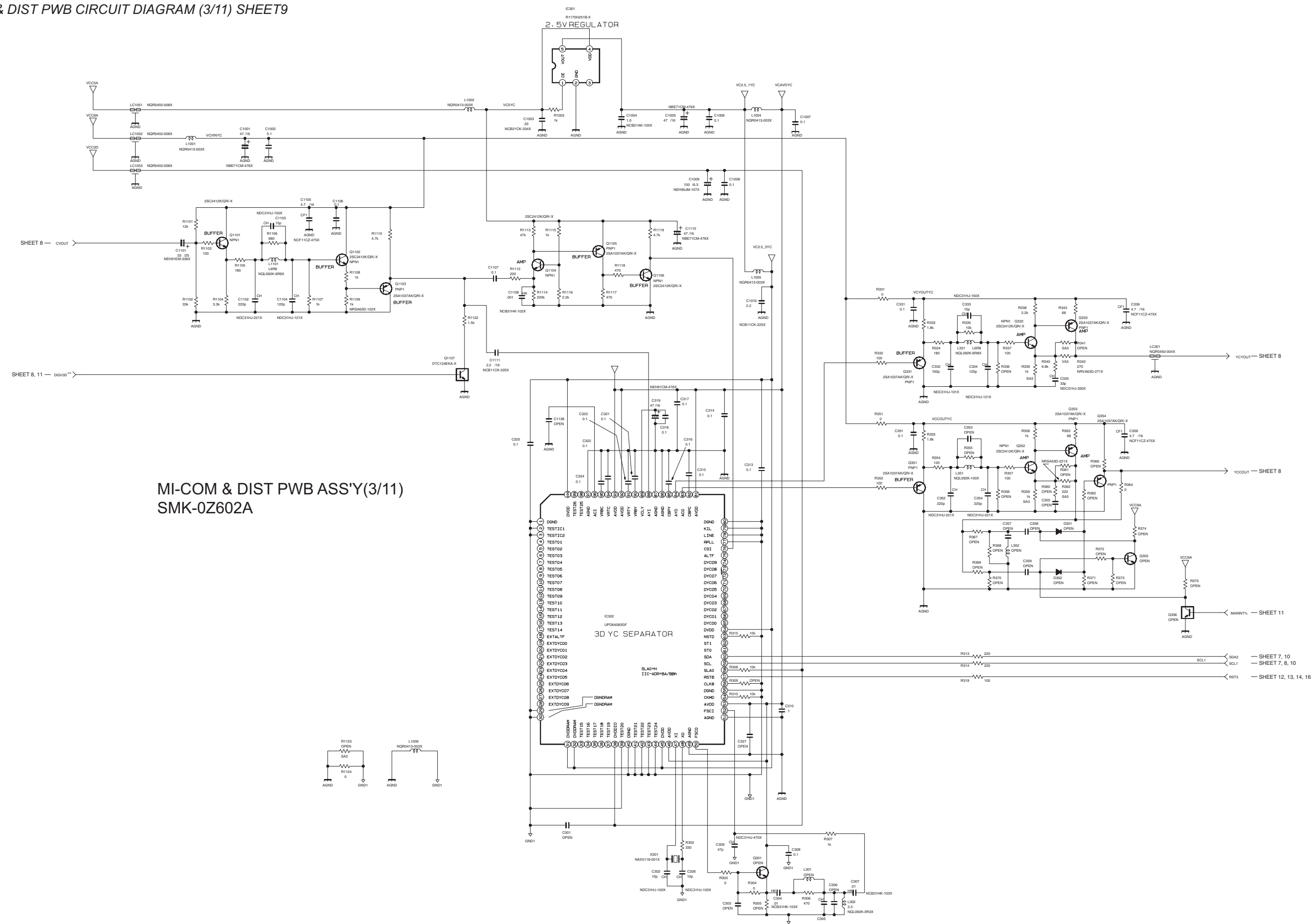


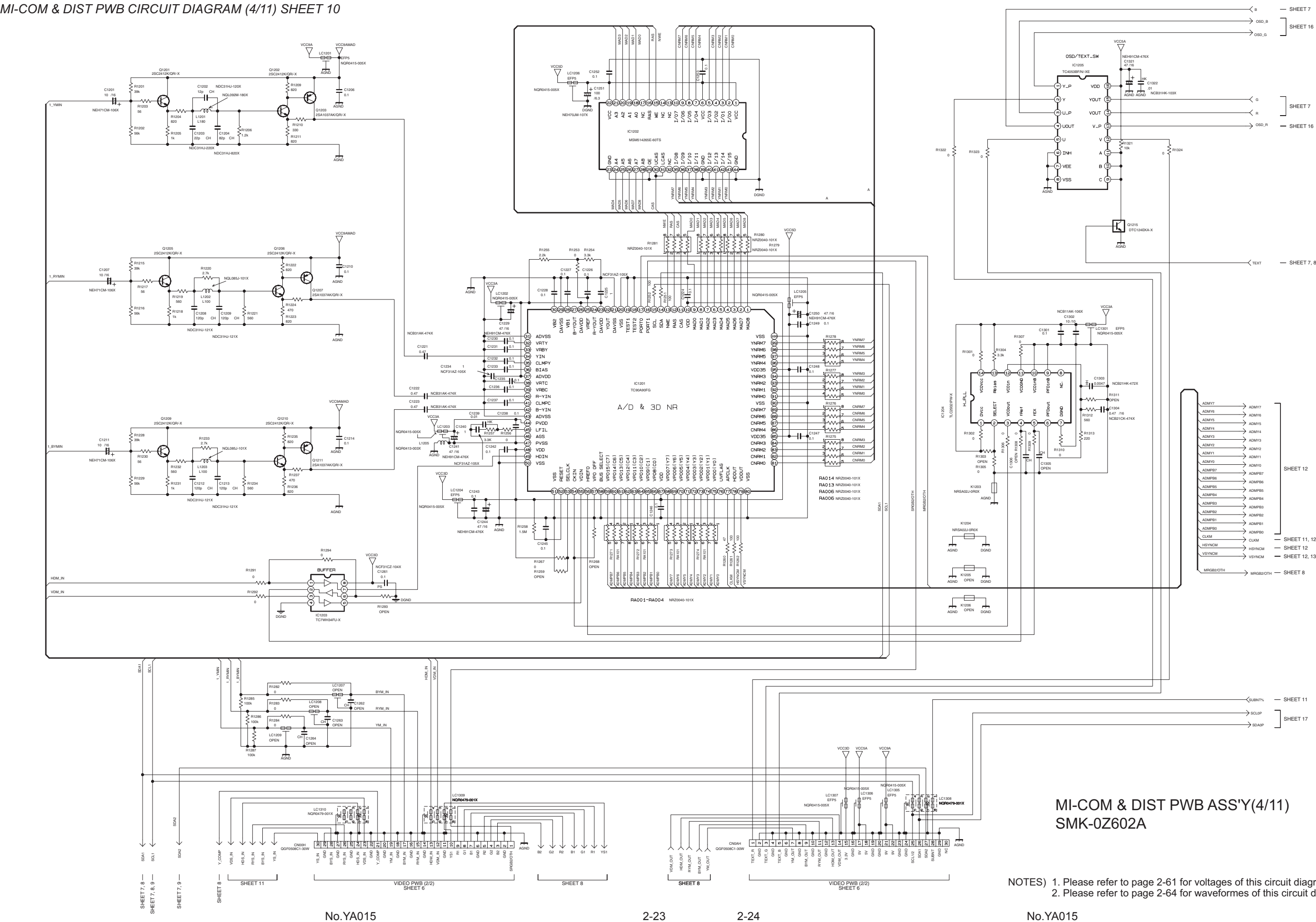


MI-COM & DIST PWB ASS'Y(2/11)  
SMK-0Z602A

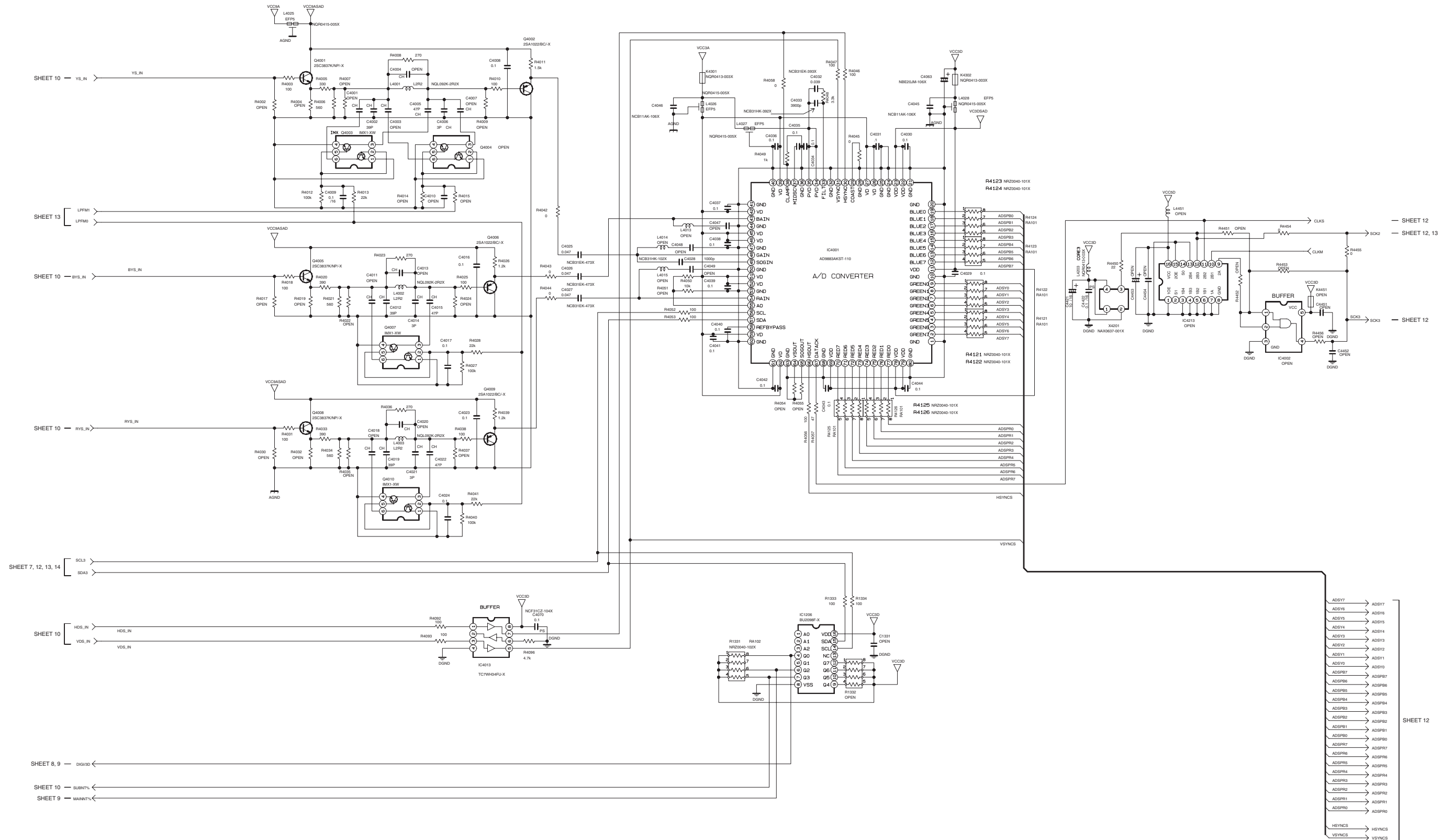


NOTES) 1. Please refer to page 2-61 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.

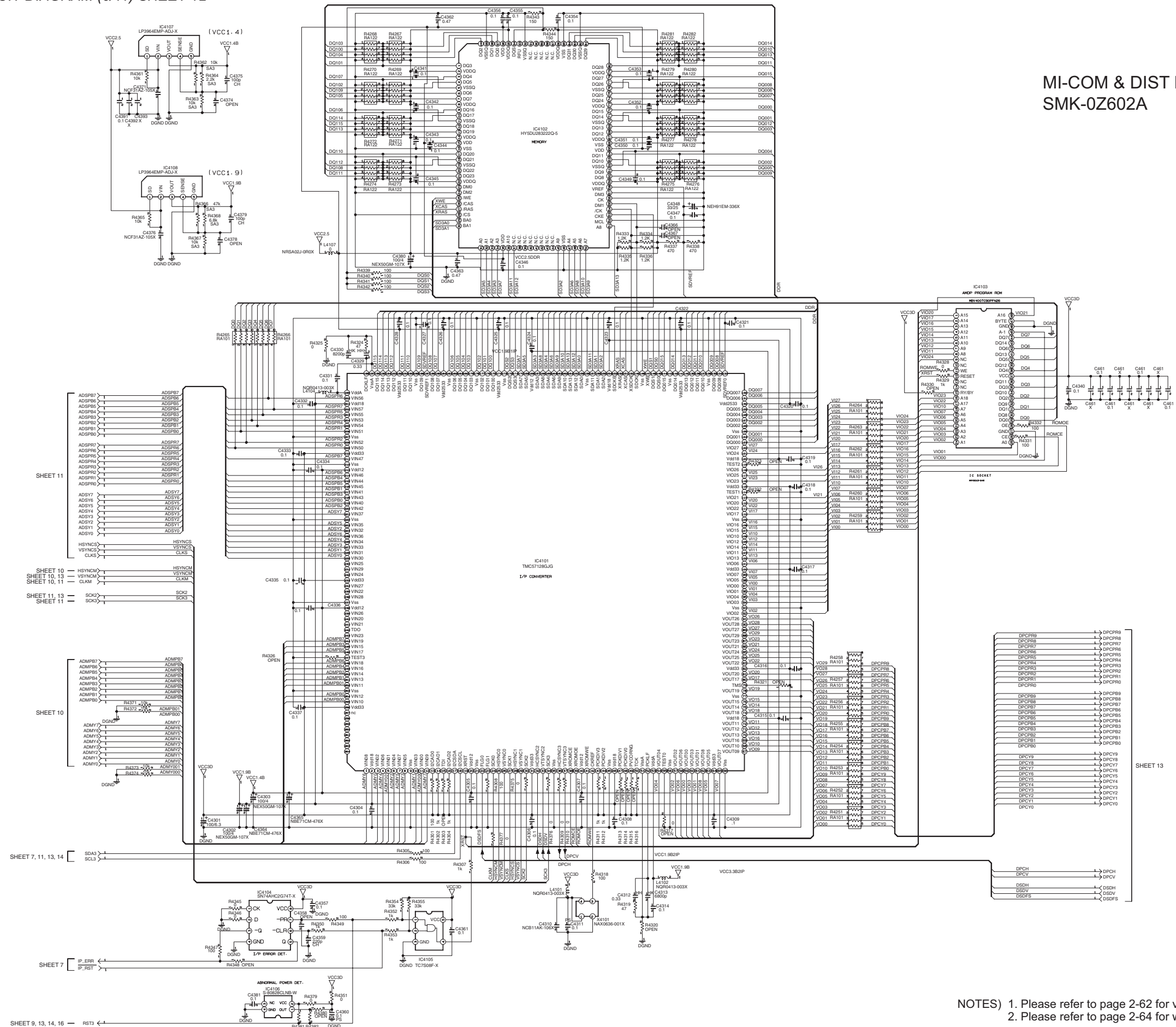




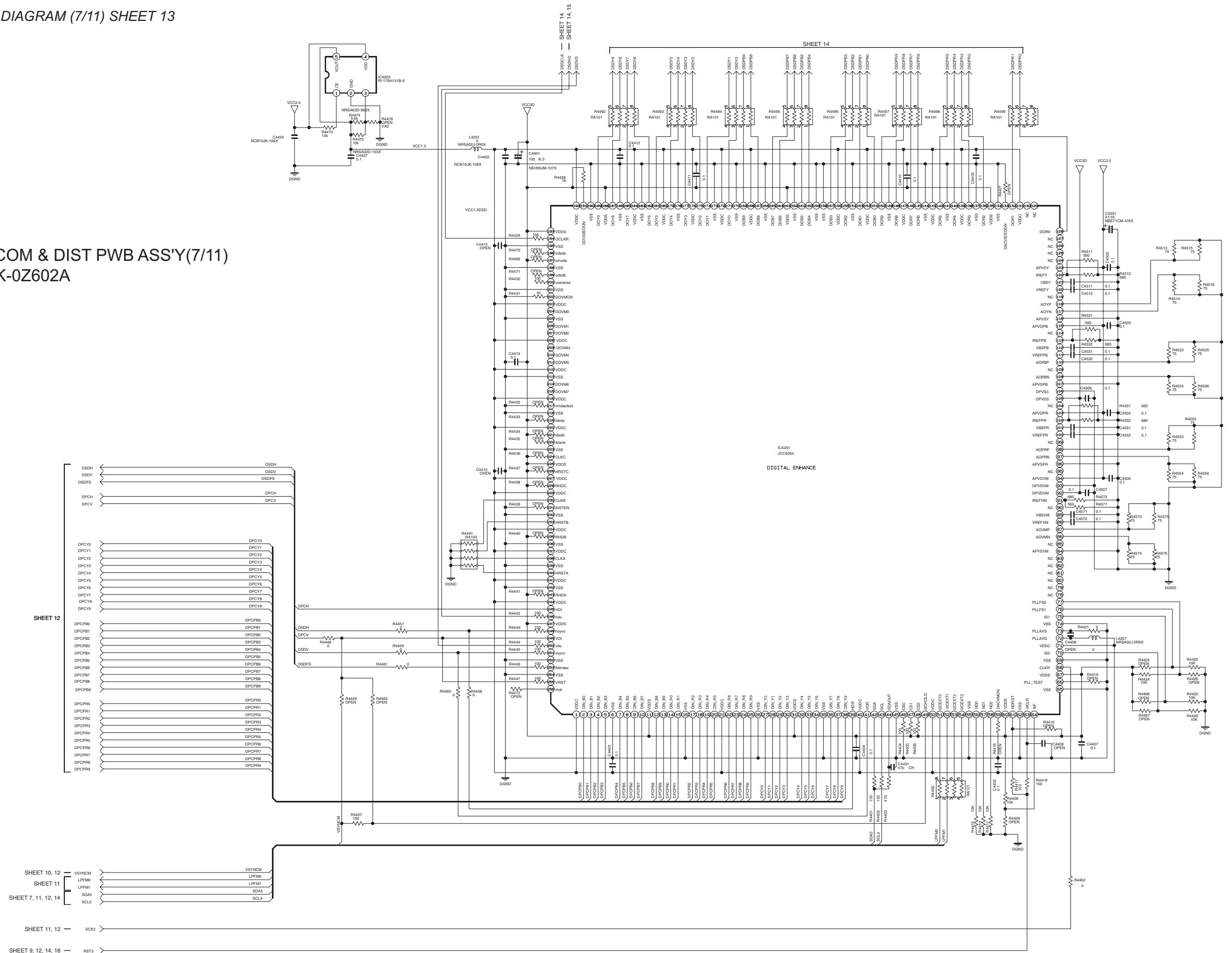




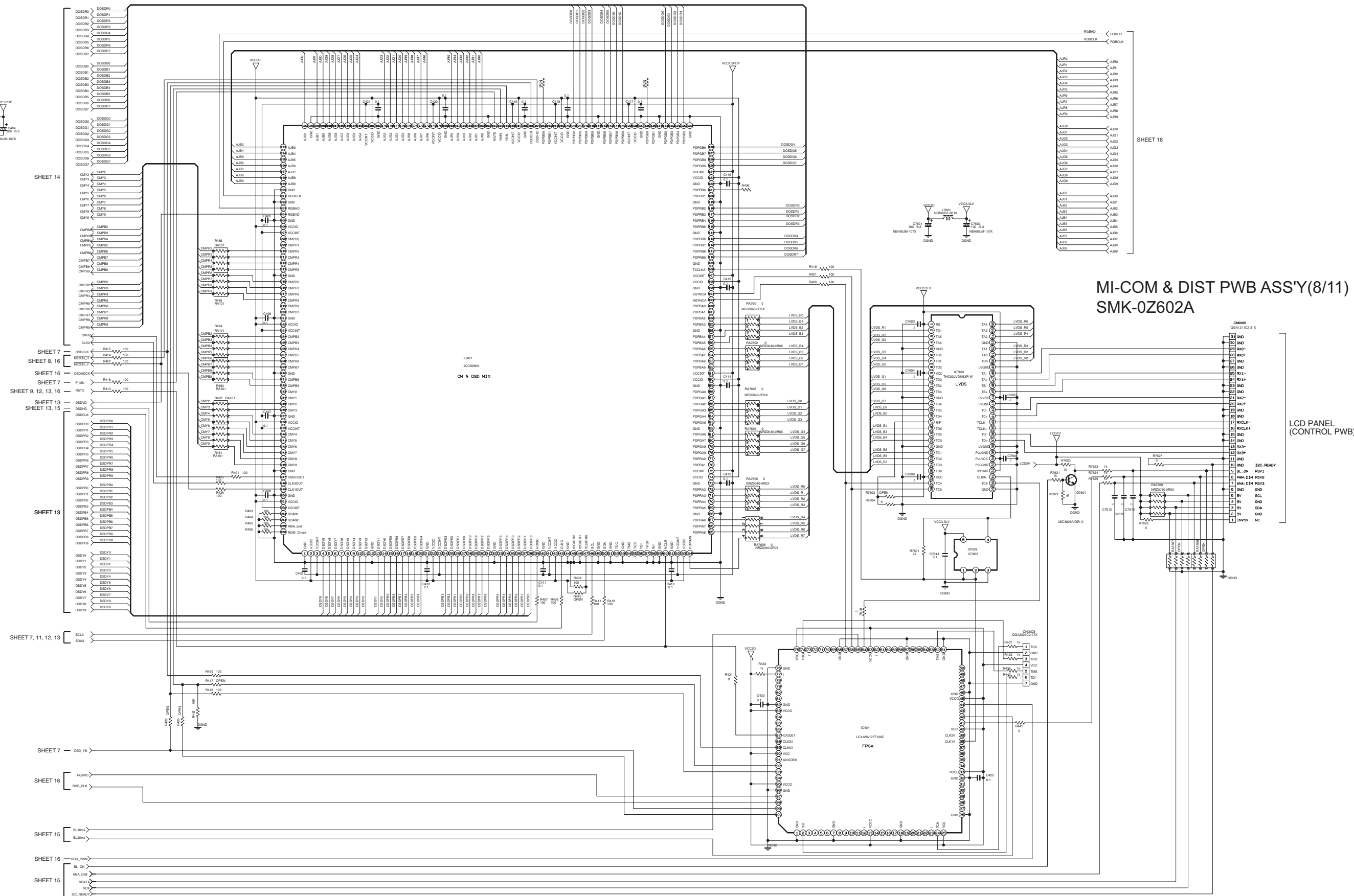
NOTES) 1. Please refer to page 2-61 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.



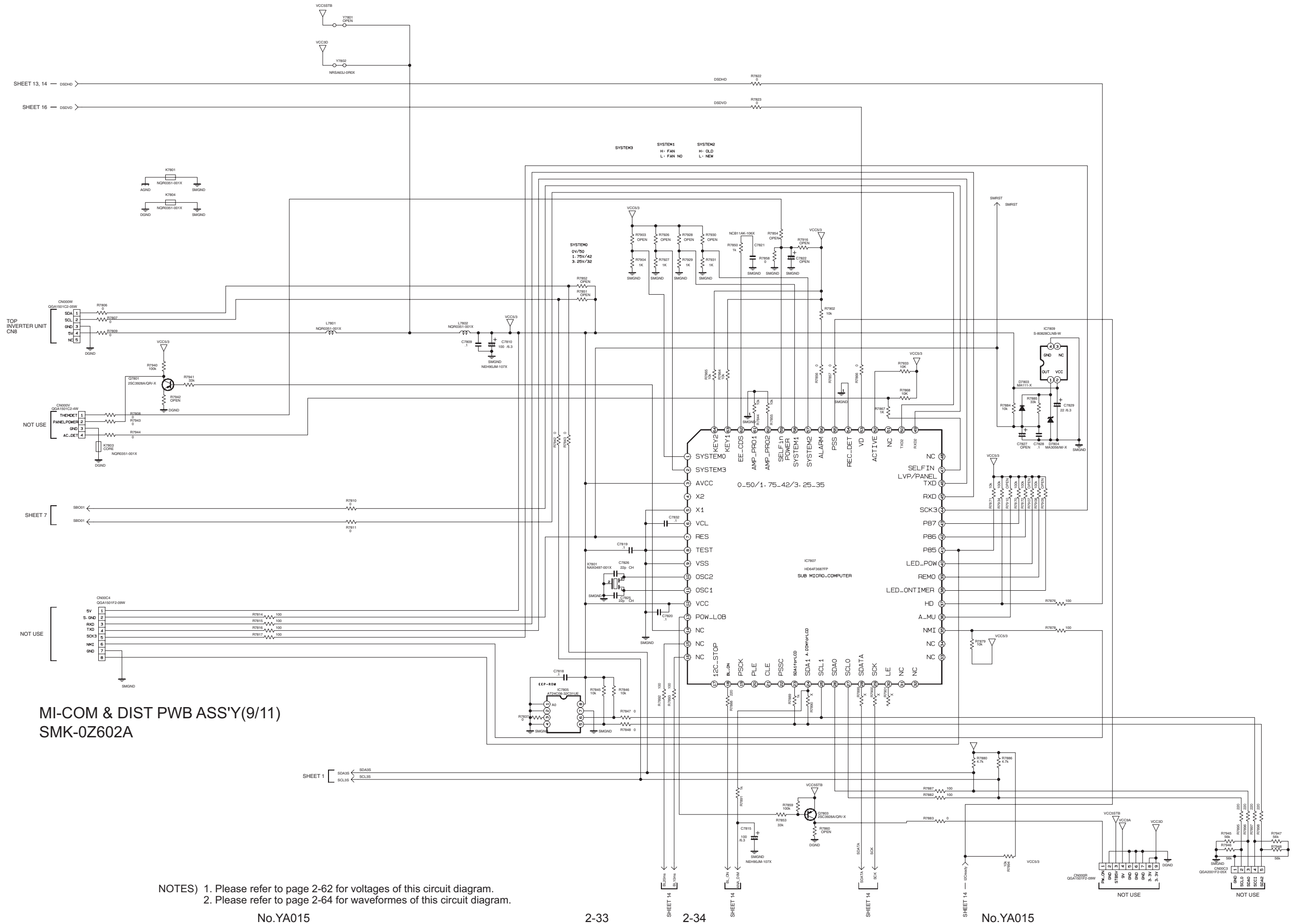
NOTES) 1. Please refer to page 2-62 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.

MI-COM & DIST PWB ASS'Y(7/11)  
SMK-0Z602A

- NOTES) 1. Please refer to page 2-62 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.

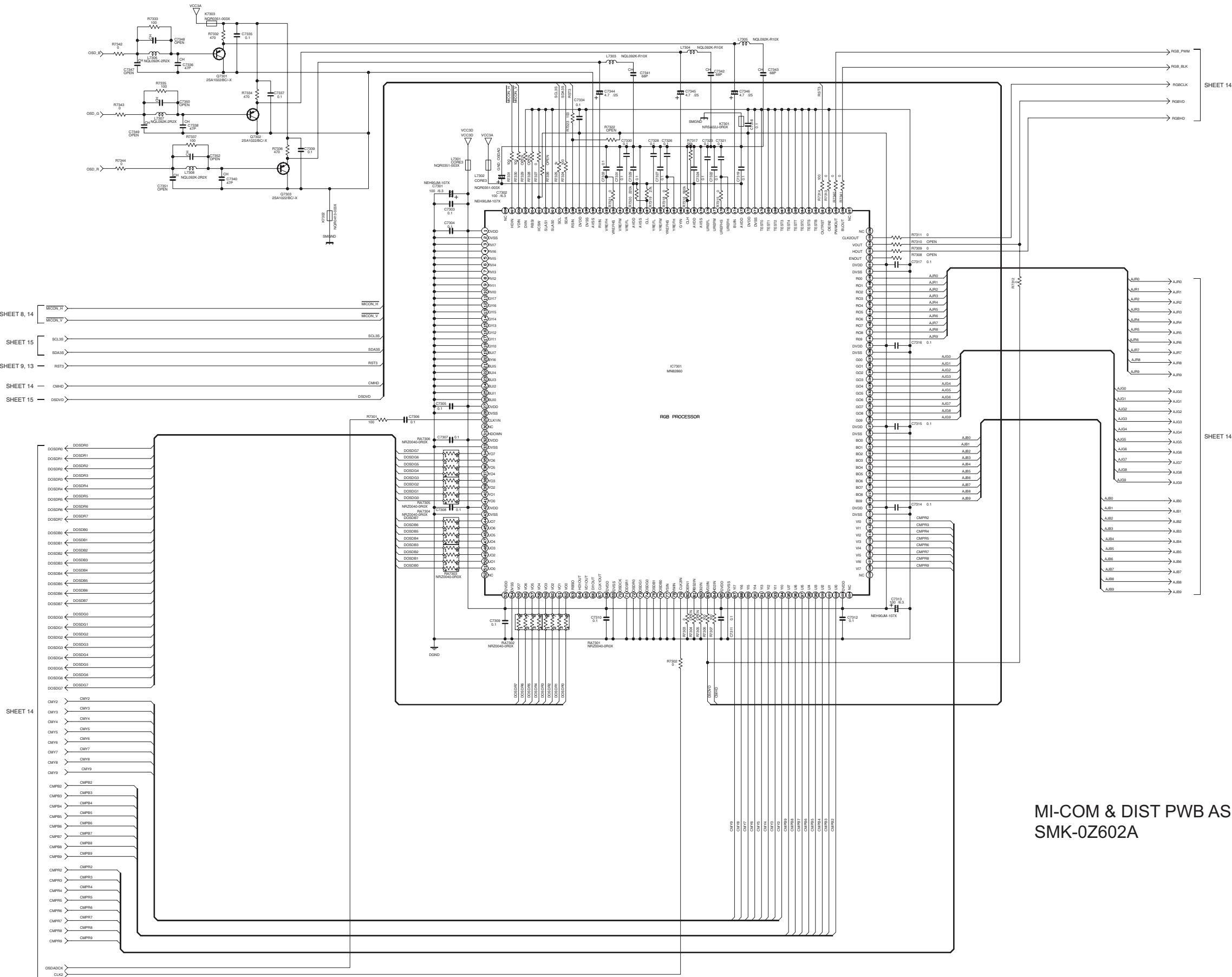


NOTES) 1. Please refer to page 2-62 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.

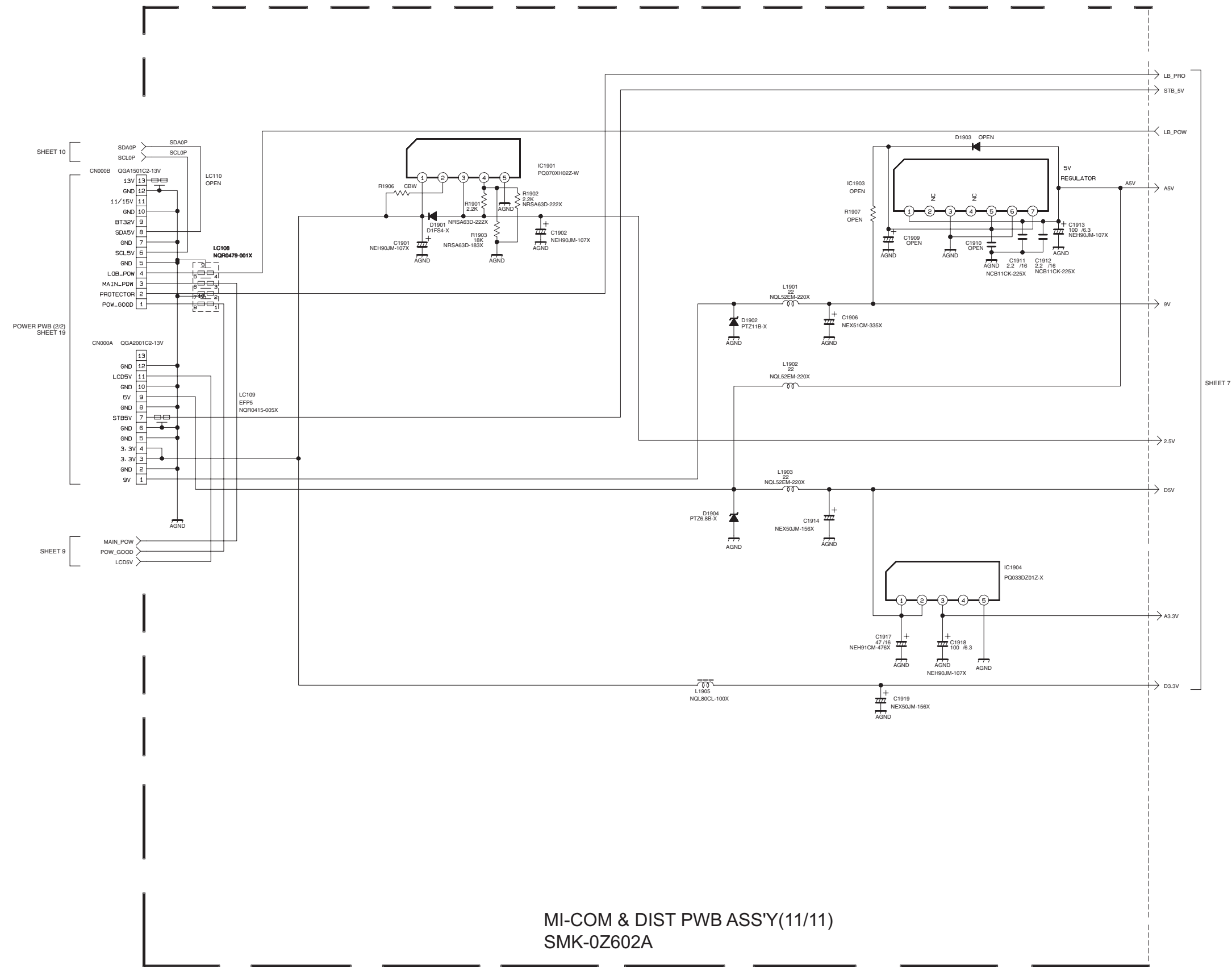


NOTES) 1. Please refer to page 2-62 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.

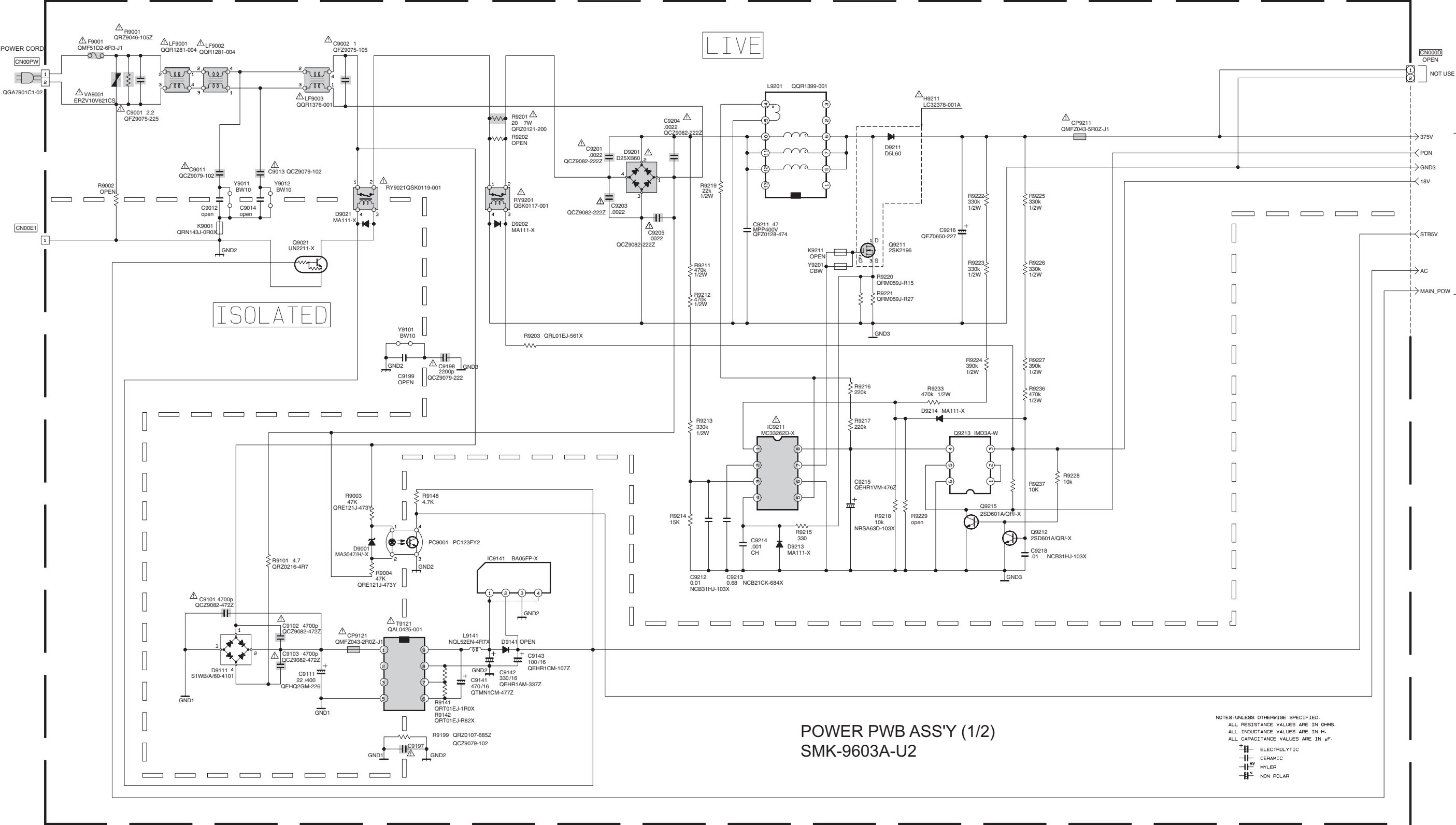




NOTES) 1. Please refer to page 2-62 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.



NOTES) 1. Please refer to page 2-62 for voltages of this circuit diagram.  
2. Please refer to page 2-64 for waveforms of this circuit diagram.



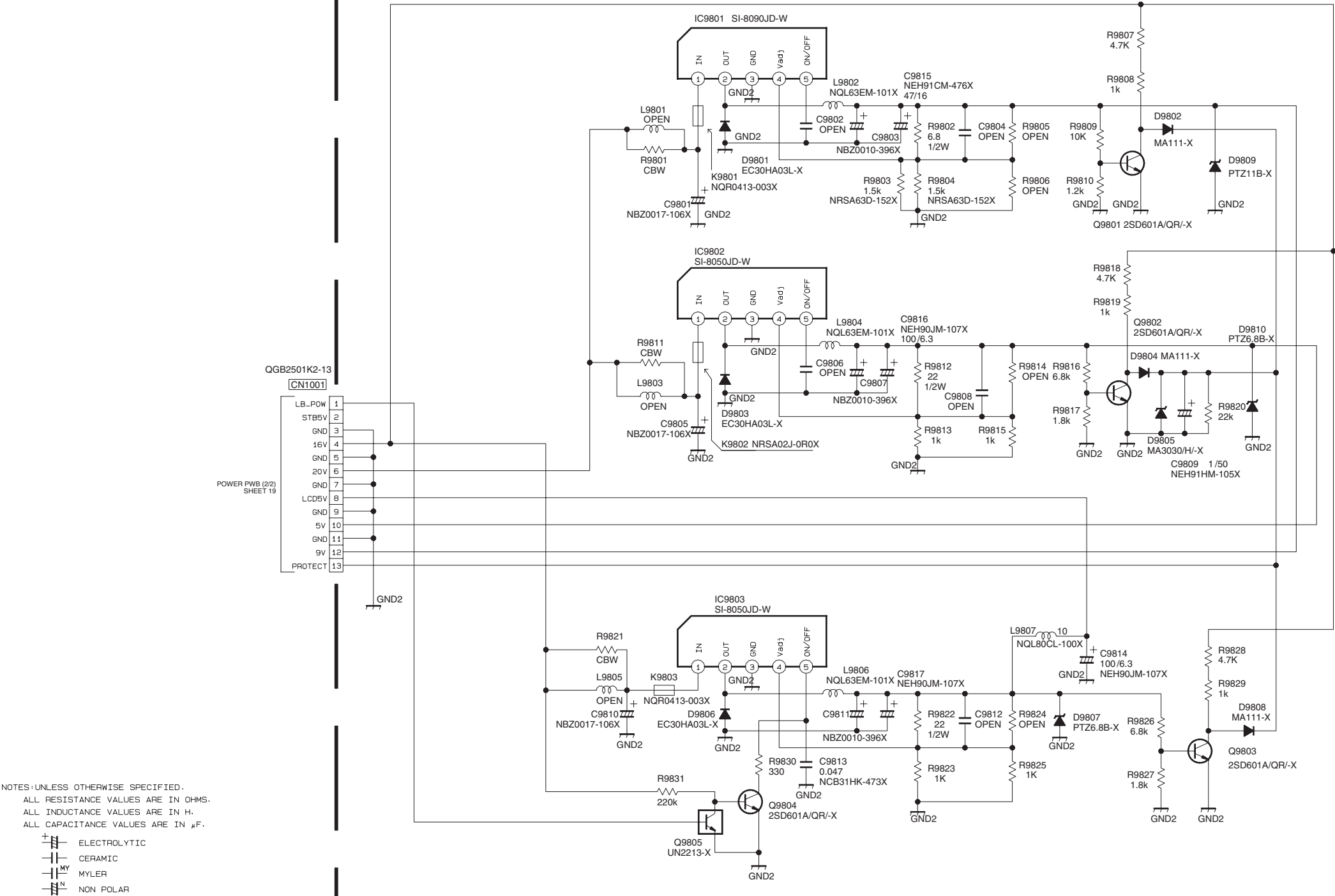
NOTES) 1. Please refer to page 2-63 for voltages of this circuit diagram.



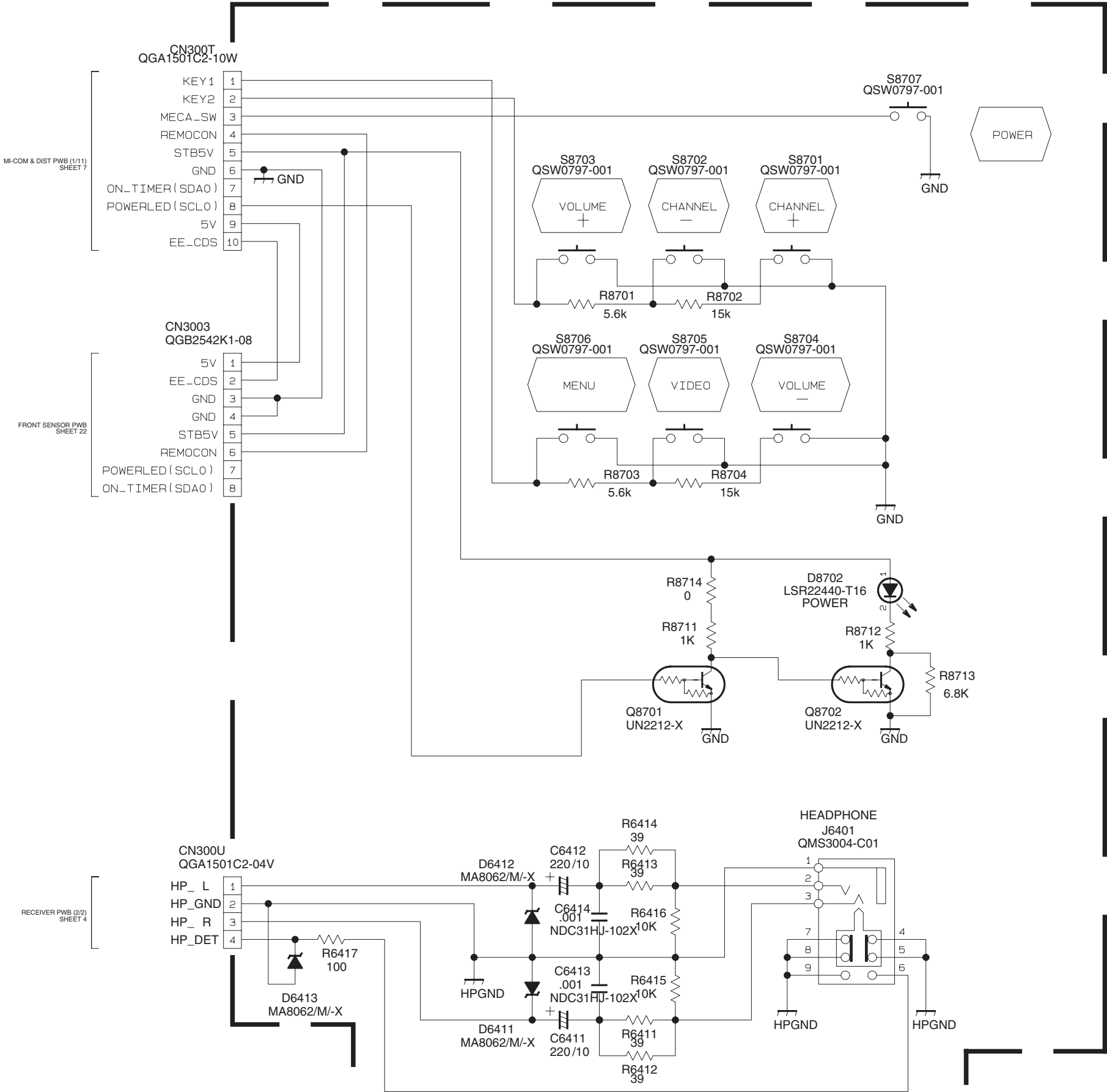


NOTES) 1. Please refer to page 2-63 for voltages of this circuit diagram.

REGULATOR PWB ASS'Y  
SMK-9613A-U2



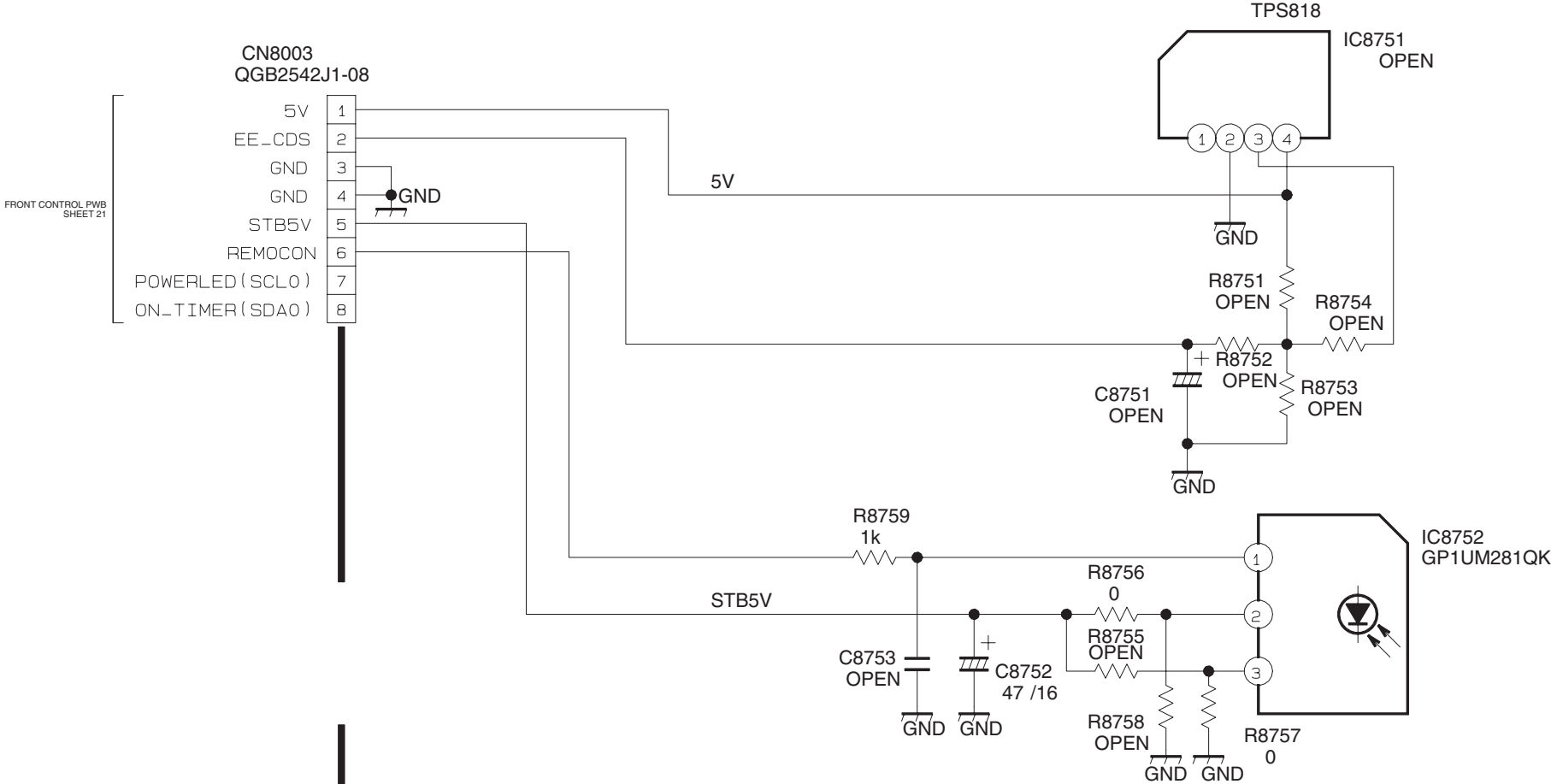
NOTES) 1. Please refer to page 2-63 for voltages of this circuit diagram.



FRONT CONTROL PWB ASS'Y  
SMK0L601A-U2

NOTES: UNLESS OTHERWISE SPECIFIED.  
ALL RESISTANCE VALUES ARE IN OHMS.  
ALL INDUCTANCE VALUES ARE IN H.  
ALL CAPACITANCE VALUES ARE IN  $\mu$ F.

ELECTROLYTIC  
 CERAMIC  
 MYLER  
 NON POLAR



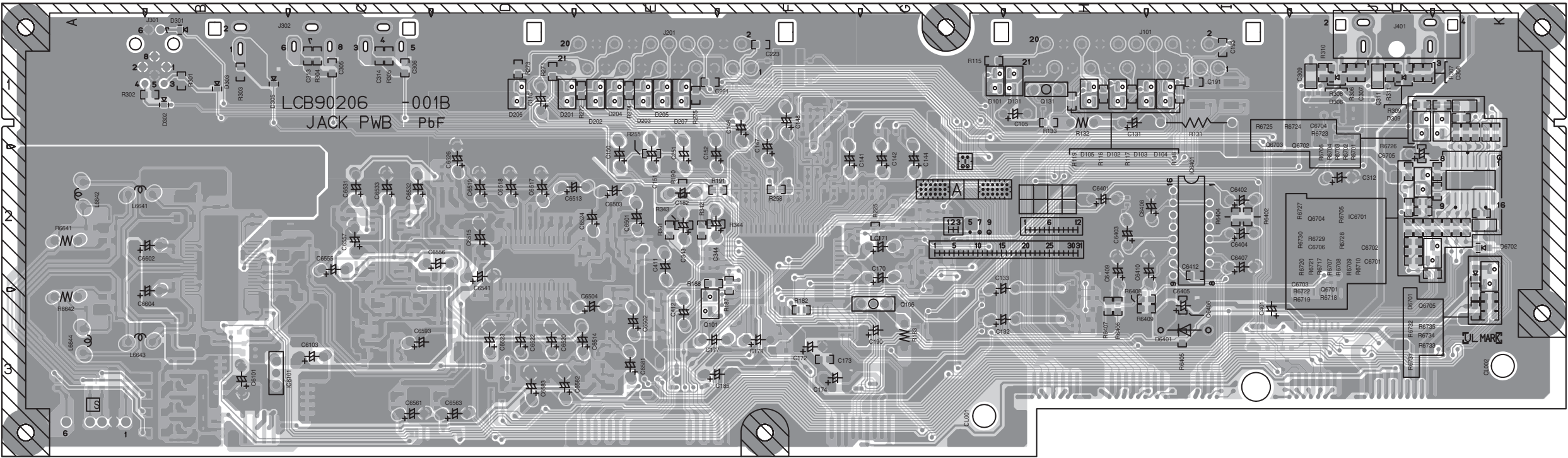
NOTES:UNLESS OTHERWISE SPECIFIED.  
ALL RESISTANCE VALUES ARE IN OHMS.  
ALL INDUCTANCE VALUES ARE IN H.  
ALL CAPACITANCE VALUES ARE IN  $\mu$ F.

+ ELECTROLYTIC  
- CERAMIC  
- MY MYLER  
- N NON POLAR

FRONT SENSOR PWB ASS'Y  
SMK0L602A-U2

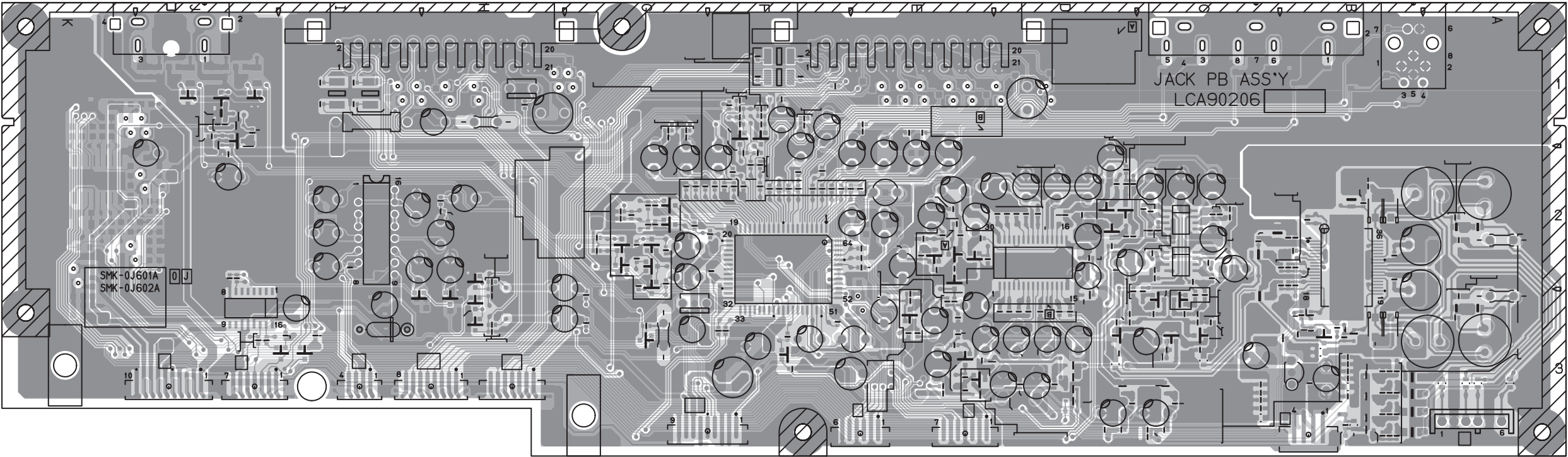
**PATTERN DIAGRAMS**  
RECEIVER PWB PATTERN [SOLDER SIDE]

TOP  
←



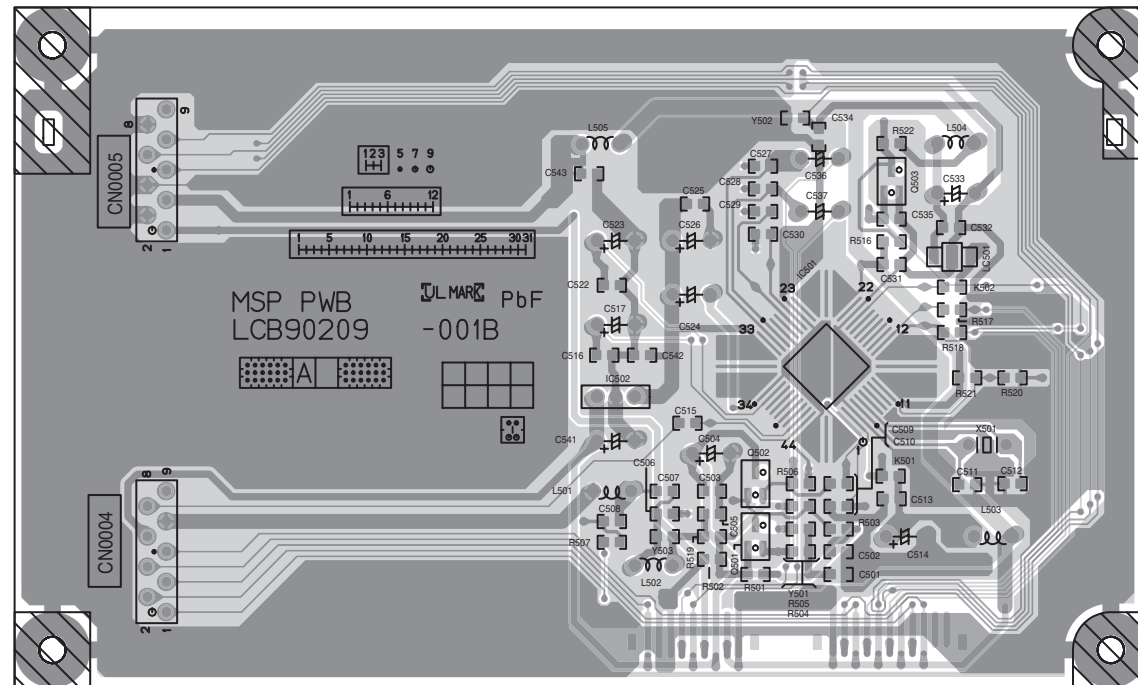
RECEIVER PWB PATTERN [PARTS SIDE]

TOP  
→

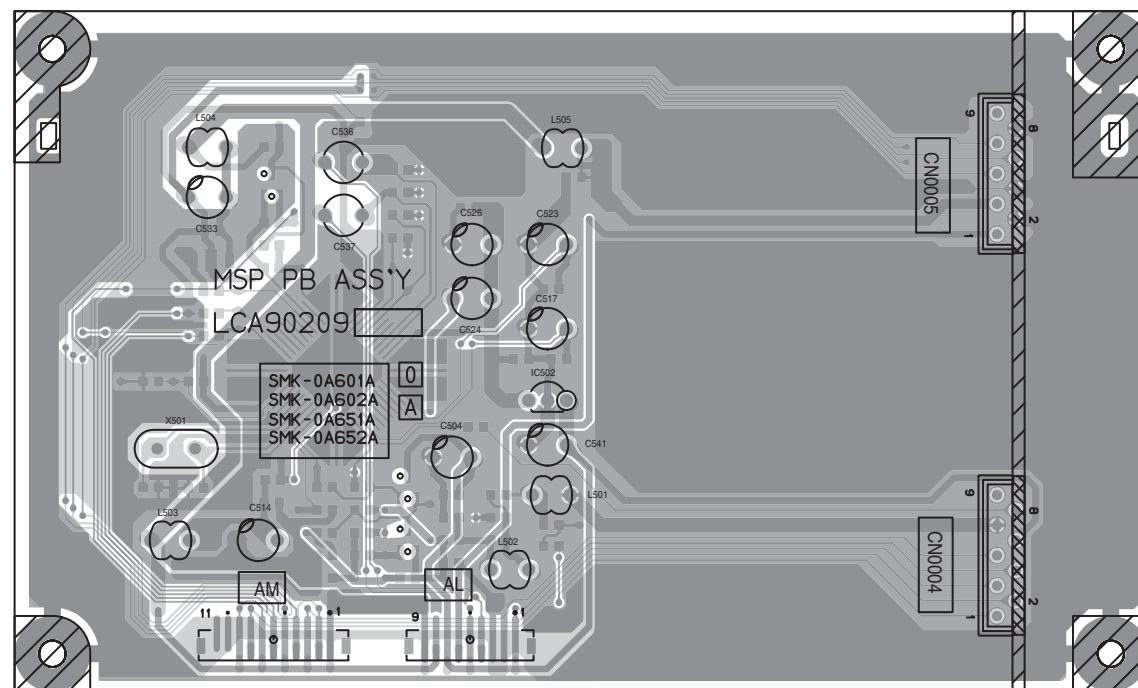




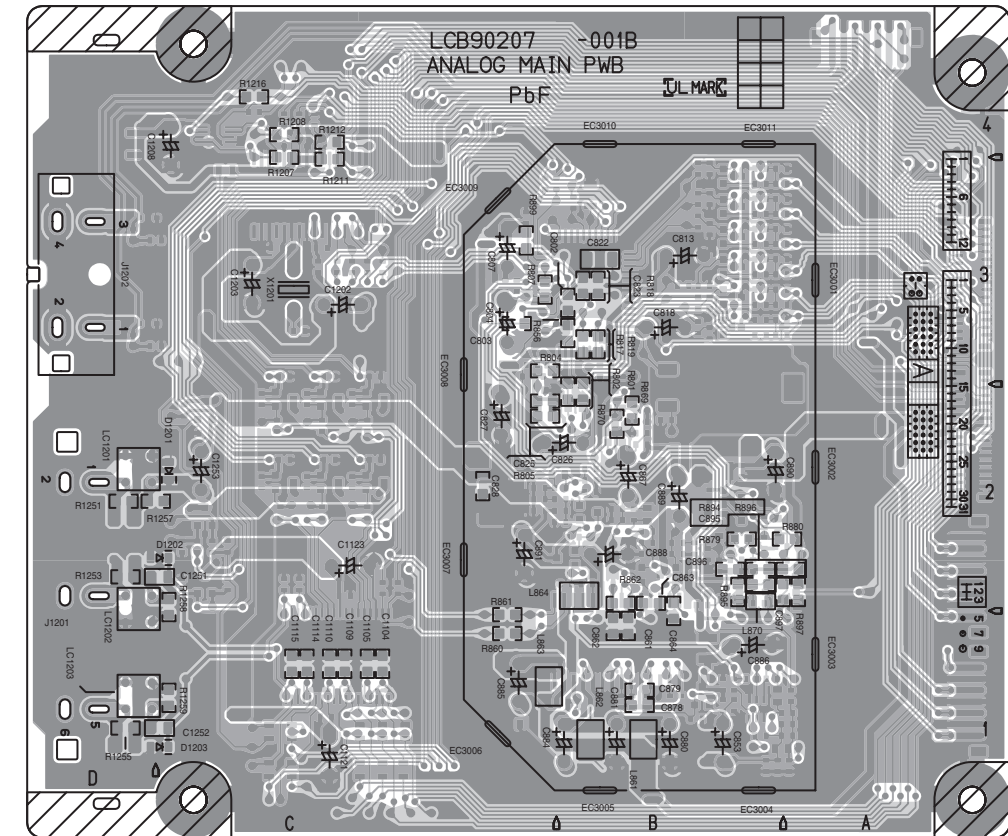
MSP PWB PATTERN [SOLDER SIDE]



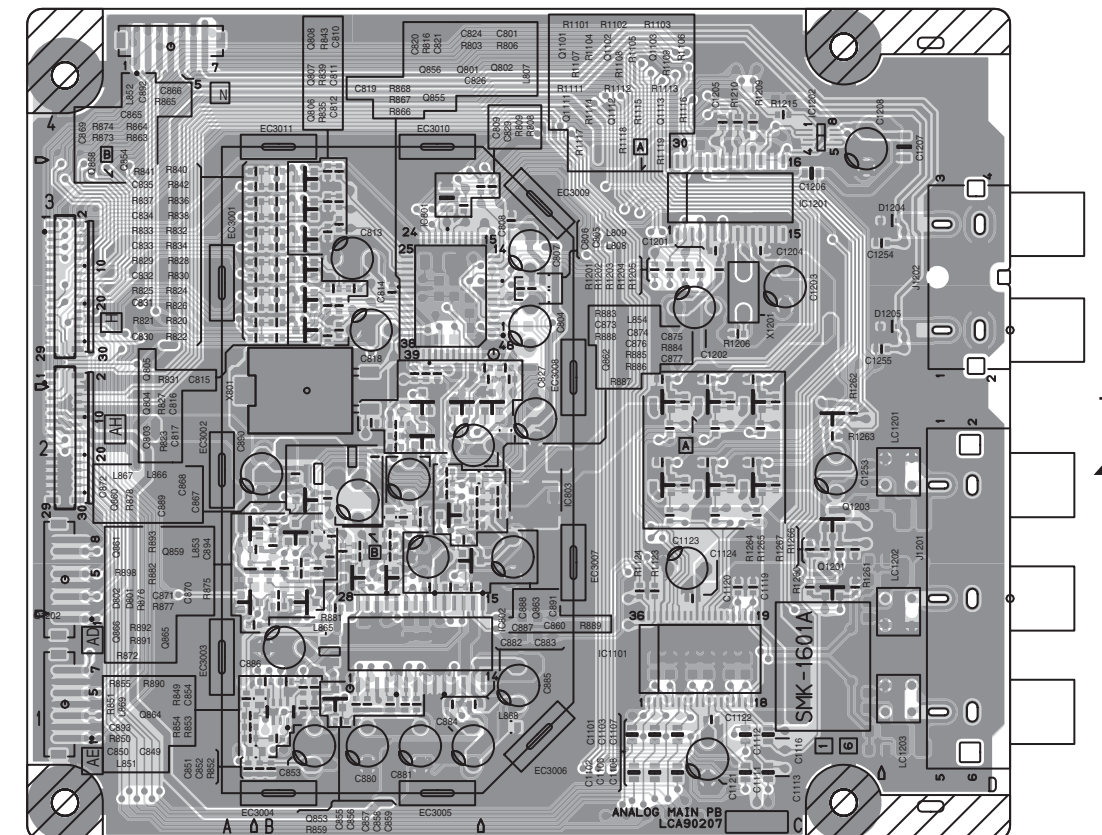
MSP PWB PATTERN [PARTS SIDE]

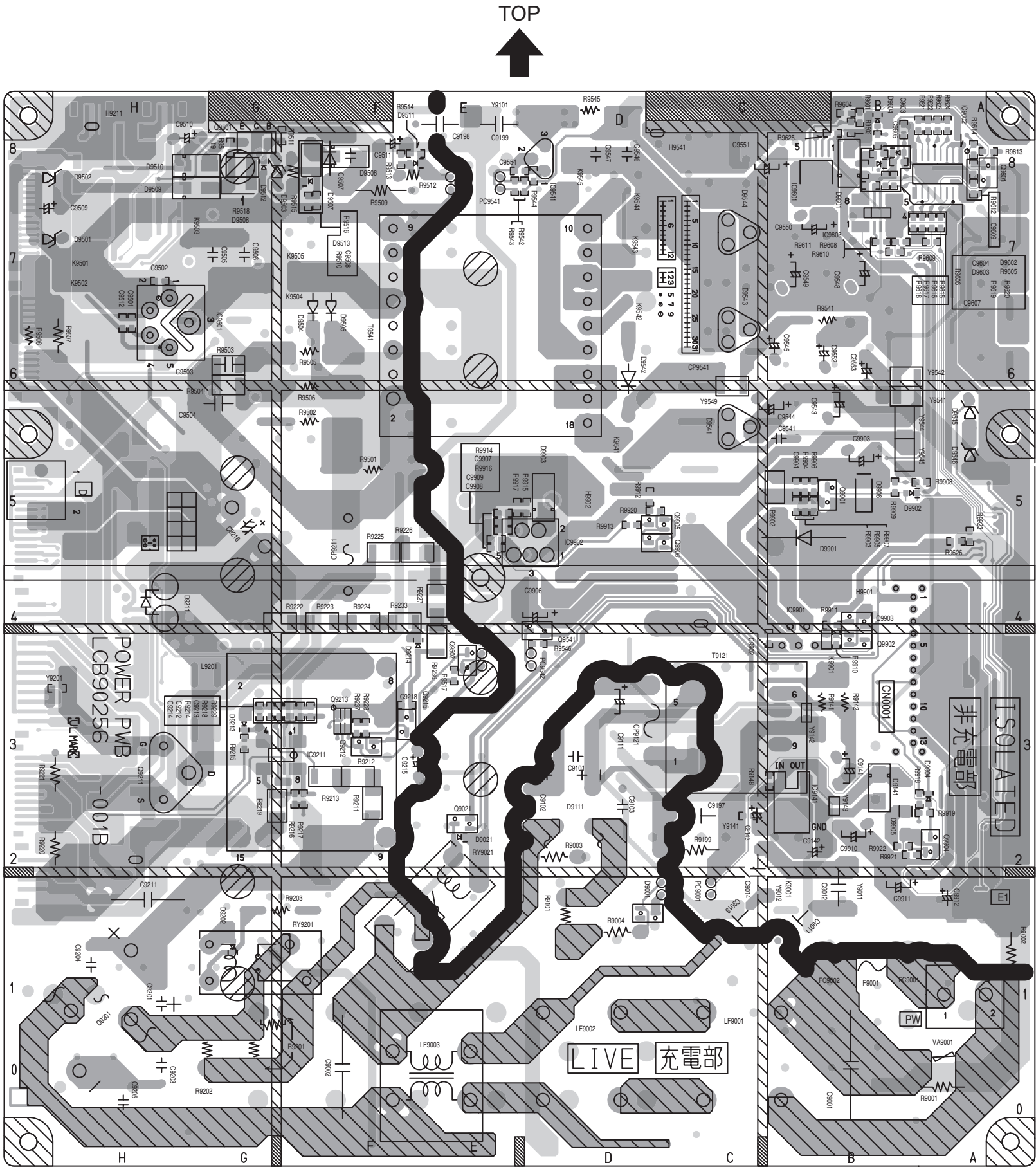


VIDEO PWB PATTERN [SOLDER SIDE]



VIDEO PWB PATTERN [PARTS SIDE]



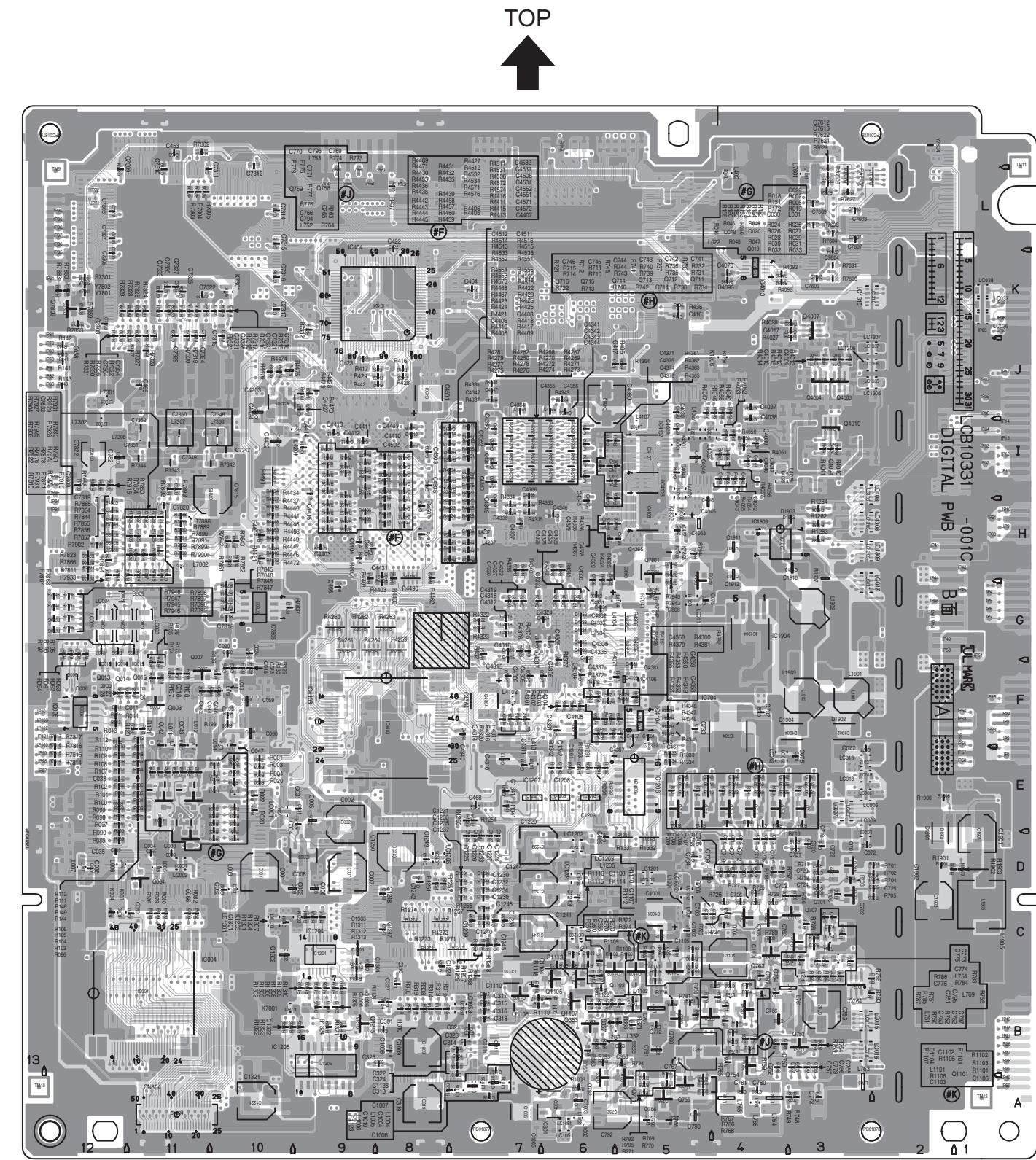




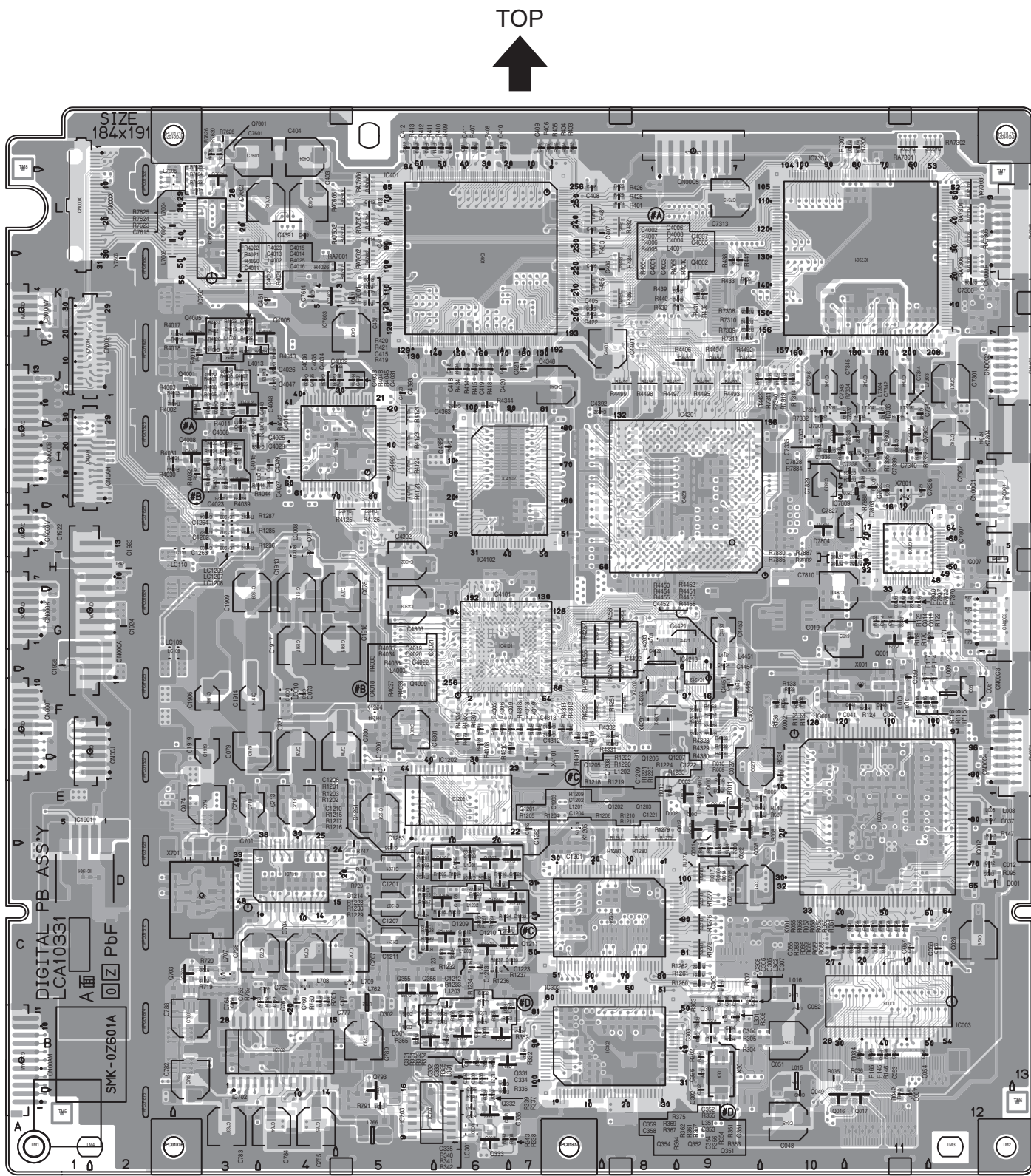




MI-COM & DIST PWB PATTERN [SOLDER SIDE]

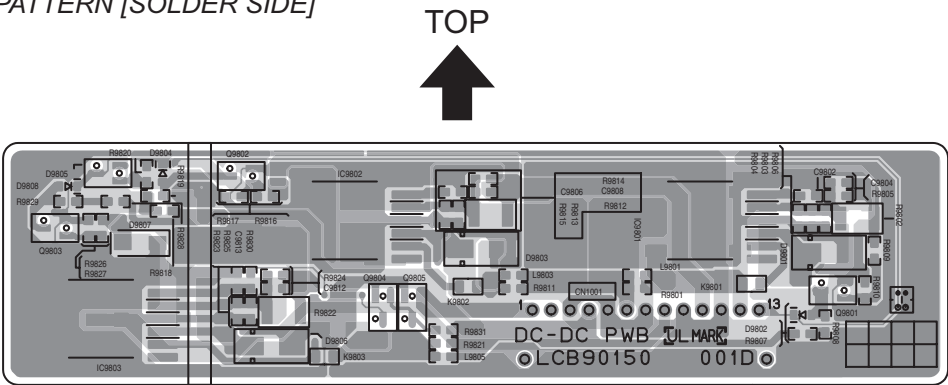


MI-COM & DIST PWB PATTERN [PARTS SIDE]

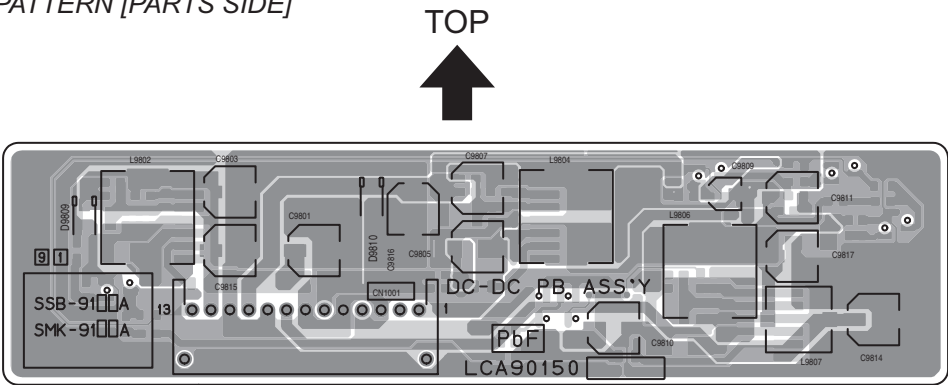




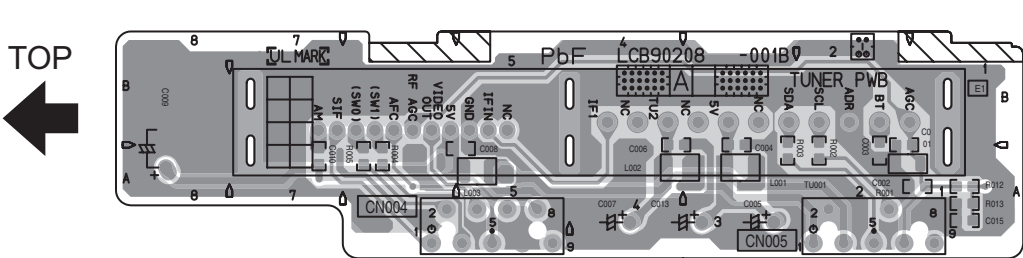
REGULATOR PWB PATTERN [SOLDER SIDE]



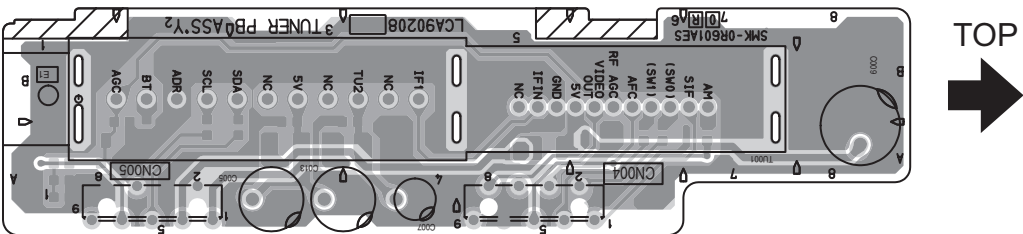
REGULATOR PWB PATTERN [PARTS SIDE]



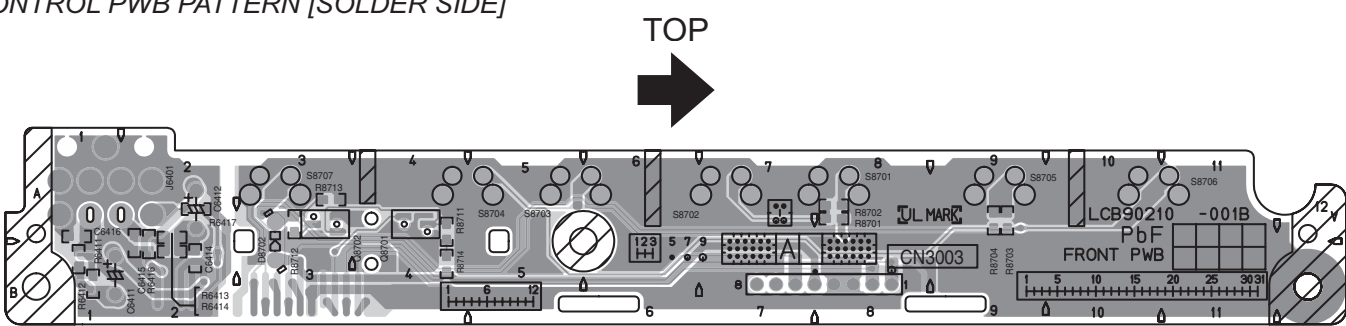
TUNER PWB PATTERN [SOLDER SIDE]



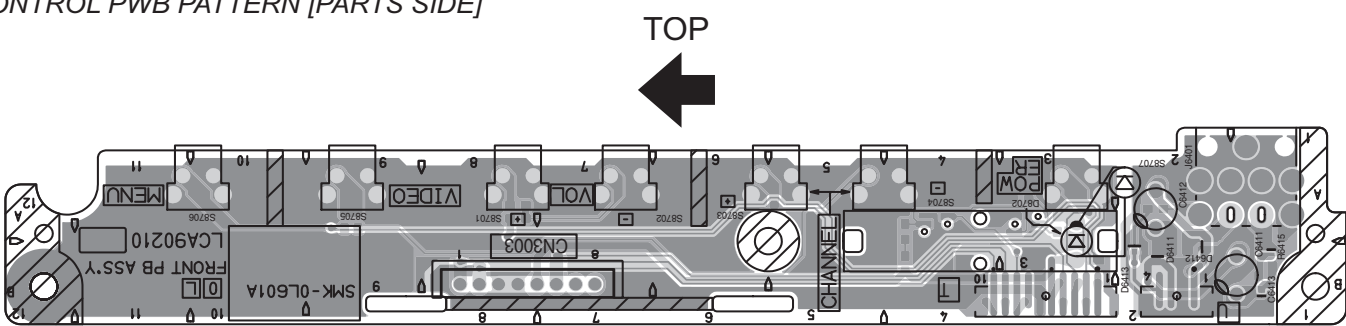
TUNER PWB PATTERN [PARTS SIDE]



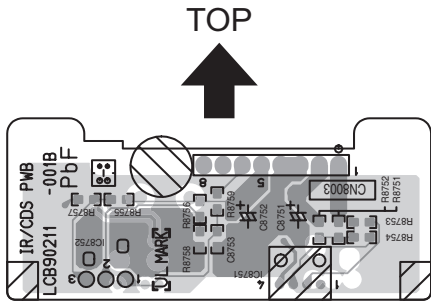
FRONT CONTROL PWB PATTERN [SOLDER SIDE]



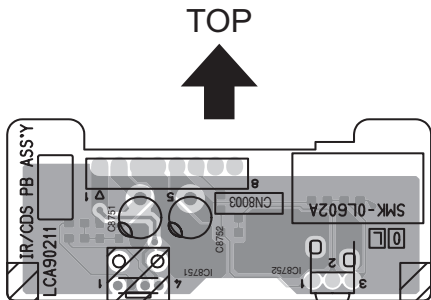
FRONT CONTROL PWB PATTERN [PARTS SIDE]



FRONT SENSOR PWB PATTERN [SOLDER SIDE]



FRONT SENSOR PWB PATTERN [PARTS SIDE]



## &lt;MI-COM &amp; DIST&gt;

**<TUNER>**  
**[P.2-5 - P.2-6]**

MODE PIN NO.	DC (V)
TU001	
1	2.9
2	1.8
3	0
4	4.9
5	4.9
6	0
7	4.9
8	0
9	30.7
10	0
11	0
12	0
13	0
14	0
15	5.0
16	1.3
17	2.9
18	0.1
19	3.1
20	0
21	0
22	2.3

**<MSP>**  
**[P.2-7 - P.2-8]**

MODE PIN NO.	DC (V)
IC501	
1	5.1
2	1.5
3	1.5
4	0
5	2.4
6	2.3
7	0.3
8	0
9	0
10	2.6
11	5.1
12	4.9
13	4.9
14	0.5
15	1.2
16	1.1
17	1.1
18	1.1
19	5.1
20	0
21	1.2
22	5.1
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	3.7
31	3.8
32	0
33	7.9
34	6.8
35	0
36	3.7
37	3.7
38	3.7
39	0
40	3.7
41	3.7
42	2.5
43	3.7
44	0
IC502	
1	9.0
2	7.9
3	0
Q502	
E	0
C	9.0
B	0
Q503	
S	0
D	0
G	5.1
CN00AM	
1	0
2	1.5
3	0.2
4	4.9
5	4.9
6	5.0
7	0
8	3.1
9	3.1
10	0
11	0

**<RECEIVER>**  
**[P.2-9 - P.2-12]**

MODE PIN NO.	DC (V)
IC101	
1	3.9
2	4.4
3	3.9
4	4.4
5	4.4
6	0
7	4.9
8	3.9
9	4.4
10	3.9
11	4.4
12	4.4
13	6.7
14	0
15	4.3
16	4.4
17	3.9
18	4.4
19	4.4
20	6.7
21	0
22	3.9
23	4.4
24	3.9
25	4.4
26	4.4
27	0
28	5.0
29	4.4
30	3.9
31	4.4
32	0
33	4.8
34	4.8
35	0
36	0
37	4.4
38	4.4
39	3.7
40	4.4
41	4.4
42	9.0
43	4.4
44	3.5
45	4.4
46	3.7
47	4.3
48	0
49	4.8
50	4.4
51	4.4
52	4.4
53	4.4
54	4.4
55	3.7
56	4.1
57	0
58	4.2
59	4.4
60	3.9
61	4.4
62	4.4
63	4.4
64	4.4
IC401	
1	3.3
2	3.3
3	0.3
4	0.3
5	0.3
6	0.4
7	2.8
8	0
9	2.5
10	2.5
11	0
12	0
13	5.2
14	4.9
15	4.8
16	5.2
IC6101	
1	11.7
2	13.9
3	0
IC6401	
1	0
2	1.9
3	1.9
4	1.9
5	1.9
6	3.8
7	1.6
8	0
9	4.5
10	1.6
11	1.9

MODE PIN NO.	DC (V)
12	1.9
13	1.9
14	1.9
15	1.9
16	1.9
IC6501	
1	5.8
2	5.9
3	5.9
4	5.8
5	5.8
6	5.9
7	5.9
8	5.9
9	0.9
10	5.8
11	4.5
12	4.4
13	5.0
14	4.8
15	0
16	11.7
17	4.5
18	0
19	5.7
20	5.9
21	5.8
22	5.8
23	5.9
24	5.9
25	5.9
26	5.8
27	5.8
28	5.9
29	5.9
30	5.8
IC6531	
1	6.3
2	6.2
3	6.3
4	0
5	6.3
6	6.3
7	6.3
8	11.7
IC6551	
1	6.2
2	6.2
3	6.4
4	0
5	6.4
6	6.3
7	6.3
8	11.7
IC6641	
1	5.0
2	16.4
3	6.9
4	5.0
5	0
6	1.0
7	4.3
8	0
9	5.0
10	2.4
11	2.4
12	0
13	0.7
14	2.4
15	2.4
16	2.3
17	0
18	0
19	0
20	0
21	0.6
22	0
23	0.5
24	6.9
25	13.8
26	13.8
27	6.8
28	6.8
29	13.8
30	13.8
31	6.9
32	1.2
33	13.8
34	1.9
35	0
36	22.3
IC6701	
1	0
2	5.0
3	4.9
4	0
5	0
6	5.0

MODE PIN NO.	DC (V)
7	5.0
8	0
9	5.0
10	4.9
11	5.0
12	0
13	5.0
14	0
15	0
16	5.0
Q101	
E	3.5
C	9.0
B	4.1
Q102	
E	2.9
C	9.0
B	3.5
Q103	
E	0
C	-0.2
B	0
Q104	
S	-0.2
D	0
G	0
Q105	
S	-0.1
D	0
G	0
Q106	
E	3.7
C	9.0
B	4.4
Q131	
E	2.1
C	0
B	1.4
Q136	
S	0
D	0
G	0
Q137	
S	-0.1
D	0
G	0
Q138	
E	0
C	0
B	0
Q211	
E	0
C	6.7
B	0
Q212	
E	0
C	6.7
B	0
Q221	
E	0
C	6.7
B	0
Q231	
E	0.7
C	4.7
B	0
Q232	
E	4.9
C	4.3
B	0
Q233	
S	0
D	0
G	2.1
Q234	
S	2.2
D	0
G	0
Q311	
S	0.4
D	0
G	0
Q312	
S	0.4
D	0
G	0
Q313	
S	0
D	0
G	0
Q314	
E	8.9
C	-0.1
B	8.9

MODE PIN NO.	DC (V)
Q411	
E	3.8
C	9.0
B	4.4
Q412	
E	3.8
C	9.0
B	4.4
Q6401	
E	0
C	0
B	0
Q6402	
E	1.8
C	0
B	0
Q6501	
E	0
C	-0.1
Q6502	
E	0
C	0
B	-0.4
Q6503	
E	0
C	-0.2
B	0
Q6504	
E	0
C	0
B	0.6
Q6505	
E	0
C	0
B	0.6
Q6506	
E	0.8
C	0.6
B	0.1
Q6551	
E	0
C	0
B	0.5
Q6552	
E	0
C	0
B	0.5
Q6581	
E	0
C	13.7
B	0
Q6582	
E	13.3
C	-0.2
B	13.7
Q6591	
E	0
C	0
B	0.2
Q6592	
E	0
C	0
B	0.2
Q6593	
E	0.4
C	0.4
B	0
Q6601	
E	0
C	0
B	0.6
Q6701	
E	0
C	5.0
B	0.3
Q6702	
E	5.0
C	5.0
B	4.4
Q6703	
E	0
C	0
B	0.6
Q6704	
E	0
C	5.0
B	0
Q6705	
E	5.0
C	4.5
B	5.0
CN000K	
1	0
2	4.9
3	4.3
4	4.9
5	4.9

MODE PIN NO.	DC (V)
6	0
7	0
CN000J	
1	3.5
2	0
3	4.2
4	0
5	0
6	0

**<VIDEO>**  
**[P.2-13 - P.2-14]**

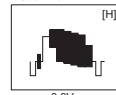
MODE PIN NO.	DC (V)
IC801	
1	2.0
2	1.6
3	0.5
4	0.2
5	2.0
6	5.1
7	2.6
8	0
9	0.3
10	0.8
11	2.1
12	5.1
13	4.8
14	4.9
15	0
16	0
17	0
18	0
19	1.3
20	2.5
21	1.6
22	1.9
23	1.9
24	0
25	2.5
26	2.6
27	2.6
28	0
29	0
30	0
31	0
32	5.1
33	2.5
34	2.5
35	2.6
36	0
37	5.1
38	4.1
39	1.8
40	3.3
41	2.0
42	4.6
43	1.8
44	2.0
45	5.0
46	2.1
47	3.8
48	1.7
IC802	
1	1.2
2	3.0
3	4.8
4	2.4
5	0
6	1.8
7	1.8
8	0
9	0
10	0
11	4.8
12	0
13	4.8
14	0
15	4.9
16	0
17	0
18	0
19	2.4
20	0
21	0
22	2.8
23	2.7
24	3.2
25	2.3
26	0
27	2.9
28	1.5
IC803	
1	8.6
2	0
3	5.1
IC1101	
1	4.4
2	4.4

MODE PIN NO.	DC (V)
3	4.4
4	4.7
5	4.7
6	4.4
7	4.4
8	4.5
9	4.7
10	4.7
11	8.6
12	4.5
13	4.5
14	4.5
15	4.7
16	4.7
17	4.5
18	4.4
19	4.5
20	4.7
21	4.7
22	0
23	4.7
24	4.7
25	4.2
26	4.2
27	4.2
28	8.6
29	4.7
30	4.7
31	4.3
32	4.4
33	4.4
34	0
35	4.8
36	4.9
IC1201	
1	0.3
2	0.2
3	0.4
4	0.3
5	0
6	0
7	6.0
8	0
9	4.7
10	0
11	8.6
12	1.2
13	0
14	0
15	0
16	0.3
17	0
18	0
19	0.3
20	0
21	4.9
22	4.9
23	0
24	2.0
25	4.9
26	2.4
27	0
28	0.2
29	0.2
30	0.1
IC1202	
1	0
2	0
3	0.2
4	0
5	0.2
6	0.3
7	0
8	0
9	0
10	0
11	4.8
12	0
13	4.8
14	0
15	4.9
16	0
17	0
18	0
19	2.4
20	0
21	0
22	2.8
23	2.7
24	3.2
25	2.

# WAVEFORMS

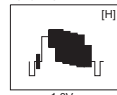
-TUNER PWB-  
[P.2-5 - P.2-6]

TU001-16

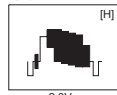


-RECEIVER PWB-  
[P.2-9 - P.2-10]

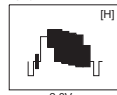
IC101-15



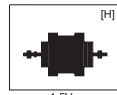
IC101-41



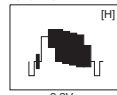
IC101-44



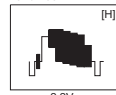
IC101-47



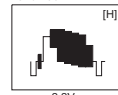
IC101-49



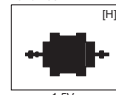
IC101-53



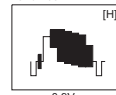
IC101-56



IC101-58

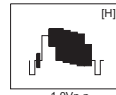


IC101-63

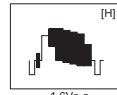


-VIDEO PWB-  
[P.2-13 - P.2-14]

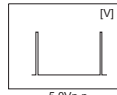
IC801-1



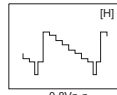
IC801-3



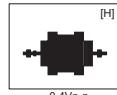
IC801-4



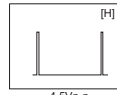
IC801-5



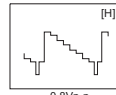
IC801-7



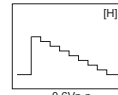
IC801-9



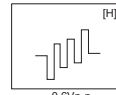
IC801-11



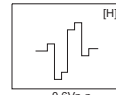
IC801-21



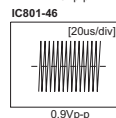
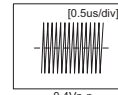
IC801-22



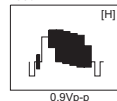
IC801-23



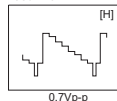
IC801-38



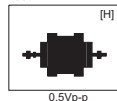
IC802-7



IC802-25

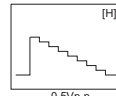


IC802-27

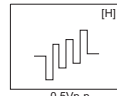


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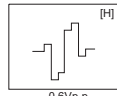
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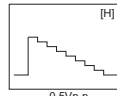
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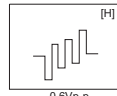
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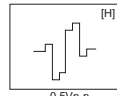
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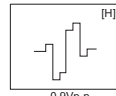
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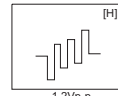
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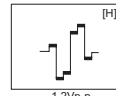
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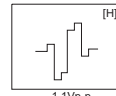
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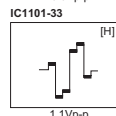
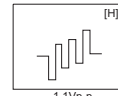
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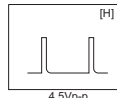
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IC1101-32



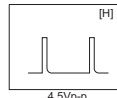
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IC1201-2



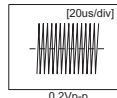
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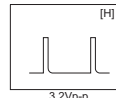
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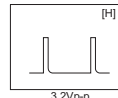
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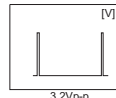
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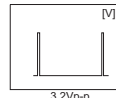
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IC1201-28

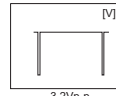


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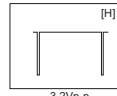


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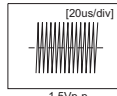
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IC001-103

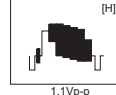


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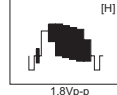


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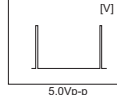
IC701-1



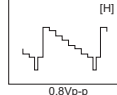
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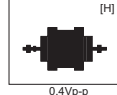
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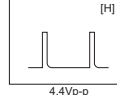
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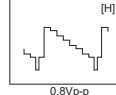
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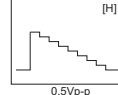
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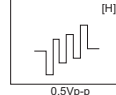
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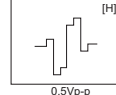
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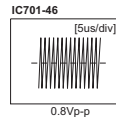
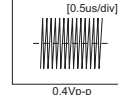
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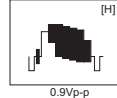
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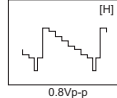
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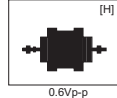
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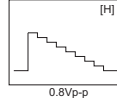
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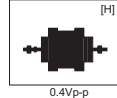
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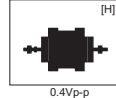
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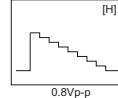
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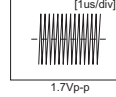


IC703-15



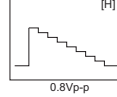
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IC302-47

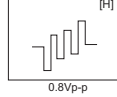


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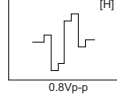
IC1201-34



IC1201-40



IC1201-42



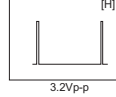
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IC1201-55

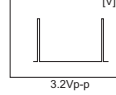


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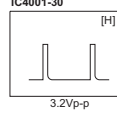


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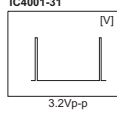
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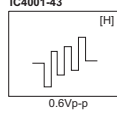
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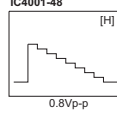
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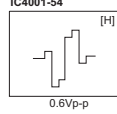
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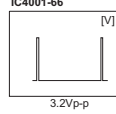
IC4001-48



IC4001-54



IC4001-66

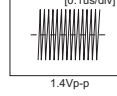


[P.2-31 - P.2-32]

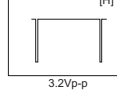
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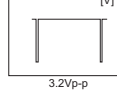
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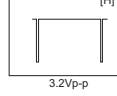
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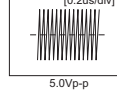
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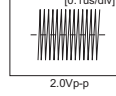
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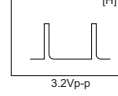
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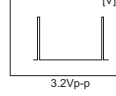
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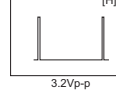
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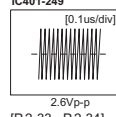
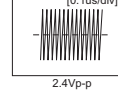
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IC401-247

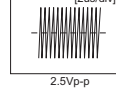


IC401-248



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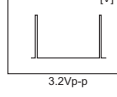
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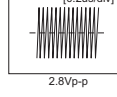


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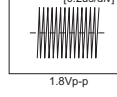


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IC7301-29



IC7301-79



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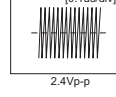
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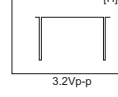
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IC7301-206



IC7301-207







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(No.YA015)



Printed in Japan  
WPC

# PARTS LIST

## CAUTION

- The parts identified by the  $\Delta$  symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety.
- The parts not indicated in this Parts List and those which are filled with lines --- in the Parts No. columns will not be supplied.
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied.

### ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
CR	Carbon Resistor	C CAP.	Ceramic Capacitor
FR	Fusible Resistor	E CAP.	Electrolytic Capacitor
PR	Plate Resistor	M CAP.	Mylar Capacitor
VR	Variable Resistor	CH CAP.	Chip Capacitor
HV R	High Voltage Resistor	HV CAP.	High Voltage Capacitor
MF R	Metal Film Resistor	MF CAP.	Metalized Film Capacitor
MG R	Metal Glazed Resistor	MM CAP.	Metalized Mylar Capacitor
MP R	Metal Plate Resistor	MP CAP.	Metalized Polystyrol Capacitor
OM R	Metal Oxide Film Resistor	PP CAP.	Polypropylene Capacitor
CMF R	Coating Metal Film Resistor	PS CAP.	Polystyrol Capacitor
UNF R	Non-Flammable Resistor	TF CAP.	Thin Film Capacitor
CH V R	Chip Variable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH MG R	Chip Metal Glazed Resistor	TAN. CAP.	Tantalum Capacitor
COMP. R	Composition Resistor	CH C CAP.	Chip Ceramic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
		CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

RESISTORS									
F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%



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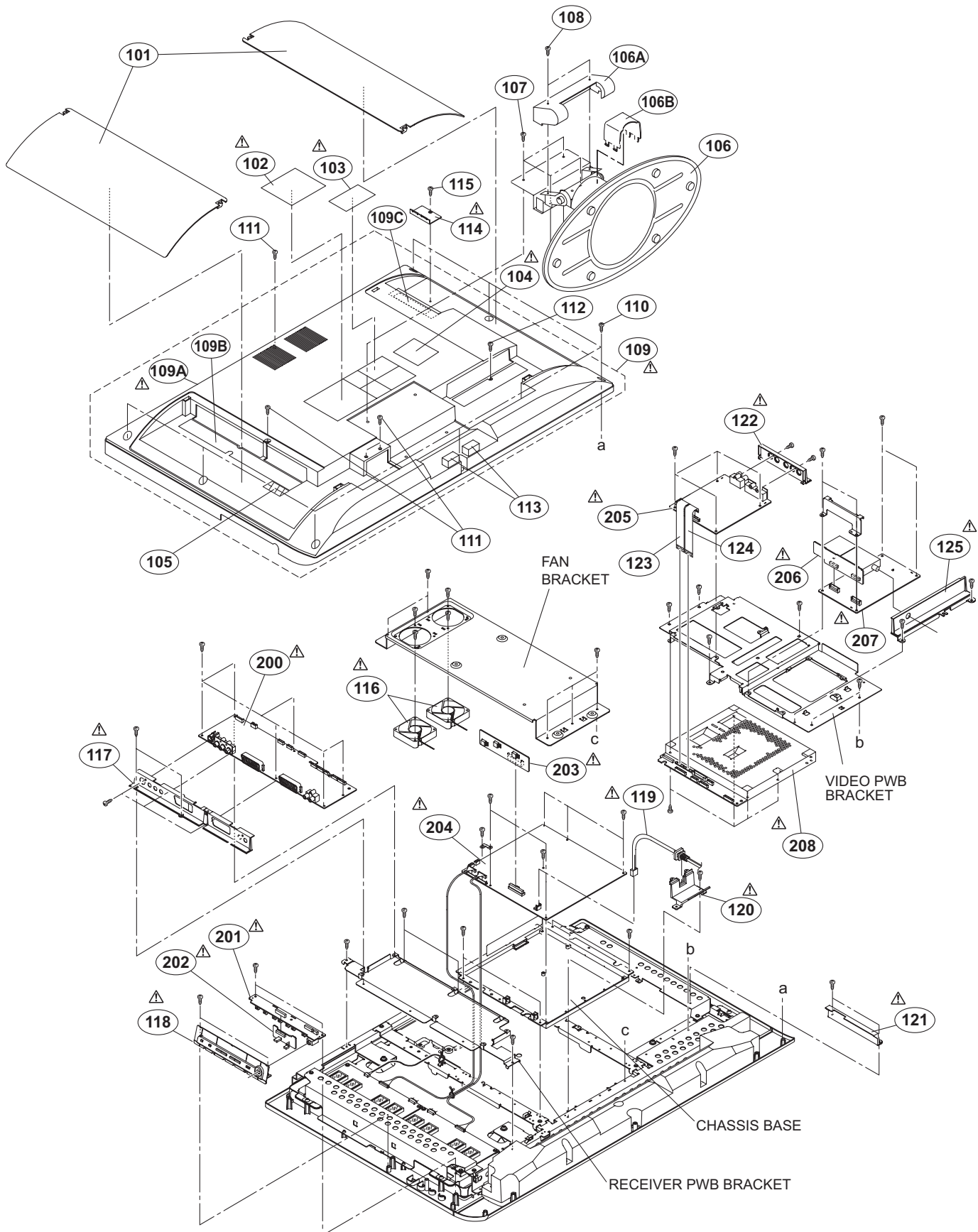
## USING P.W. BOARD & REMOTE CONTROL UNIT

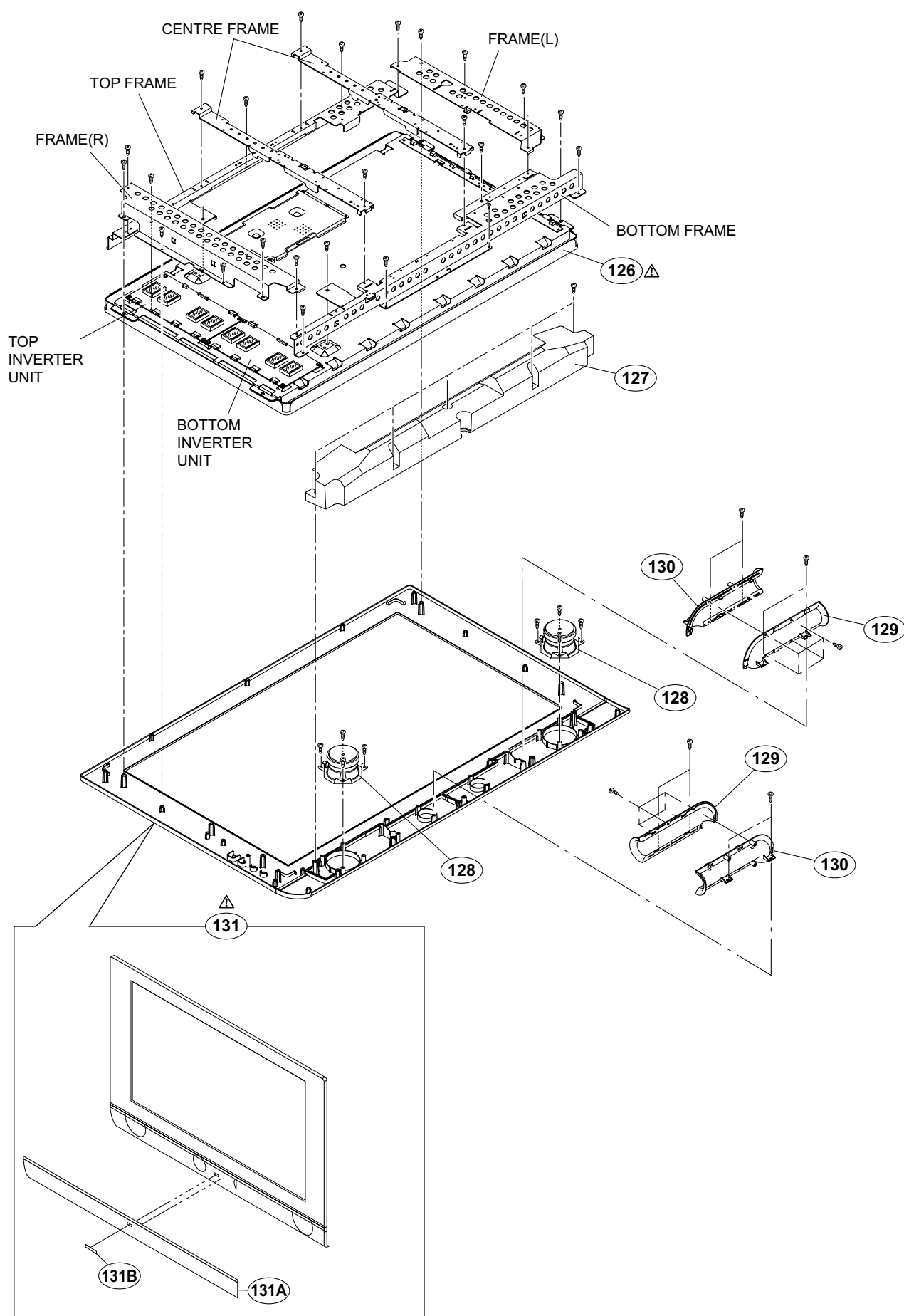
P.W.B ASS'Y	LT-32C31BJE	LT-32C31BUE	LT-32C31SJE	LT-32C31SUE
VIDEO P.W.B	SMK-1602A-U2	←	←	←
REGULATOR P.W.B	SMK-9613A-U2	←	←	←
POWER P.W.B	SMK-9603A-U2	←	←	←
MSP P.W.B	SMK0A602A-U2	←	←	←
RECEIVER P.W.B	SMK0J602A-U2	←	←	←
FRONT SENSOR P.W.B	SMK0L602A-U2	←	←	←
FRONT CONTROL P.W.B	SMK0L601A-U2	←	←	←
TUNER P.W.B	SMK0R602A-U2	←	←	←
MI-COM & DIST MODULE P.W.B	SMK-0Z602A	←	←	←
REMOTE CONTROL UNIT	RM-C1808-1C	←	←	←

# EXPLODED VIEW PARTS LIST

△	Ref.No.	Part No.	Part Name	Description	Local
	101	LC11686-001B-0K	JACK COVER	(x2)	
△	102	LC21301-013A	RATING LABEL		LT-32C31BJE
△	102	LC21301-012A	RATING LABEL		LT-32C31BUE
△	102	LC21301-015A	RATING LABEL		LT-32C31SJE
△	102	LC21301-014A	RATING LABEL		LT-32C31SUE
△	103	LC21300-010A	RATING LABEL		LT-32C31BJE
△	103	LC21300-009A	RATING LABEL		LT-32C31BUE
△	103	LC21300-012A	RATING LABEL		LT-32C31SJE
△	103	LC21300-011A	RATING LABEL		LT-32C31SUE
△	104	LC30789-002B-U	WARNING LABEL		LT-32C31BUE,LT-32C31SUE
	105	LC41749-001A	CAUTION LABEL		
	106	LC41609-001C-0K	STAND ASSY	Inc.106A-106B	
	106A	N0354	STAND COVER		
	106B	N0355	CORD HOLDER		
	107	QYSPSPD5012M	SCREW	M5 x 12mm(x4)	
	108	QYSPSPD3008N	SCREW	3mm x 8mm(x2)	
△	109	LC11689-003A-U	REAR COVER ASSY	Inc.109A-109C	
△	109A	LC11685-003A-U	REAR COVER		
	109B	LC32367-003A	OPERATION SHEET		
	109C	LC32368-003A	OPERATION SHEET		
	110	QYSBSFG4016M	TAP SCREW	4.0mm x 16mm(x7)	
	111	QYSSSF3010M	TAP SCREW	M3 x 10mm(x3)	
	112	QYSPSPD3008M	SCREW	3mm x 8mm(x2)	
	113	LC30599-054A	STICK SHEET	(x2)	
△	114	LC32366-001A-HK	SERVICE COVER		
	115	QYSBSF3012M	TAP SCREW	3.0mm x 12mm	
△	116	QAR0295-002	COOLING FAN	(x2)	
△	117	LC21334-002B-0K	TERMINAL BASE		
△	118	LC32351-003B-0K	CONT KNOB ASSY		
△	119	QMPN260-170-JC	POWER CORD(EK)	1.7m BLACK	LT-32C31BJE,LT-32C31SJE
△	119	QMPK300-170-JC	POWER CORD(EU)	1.7m BLACK	LT-32C31BUE,LT-32C31SUE
△	120	LC21348-001D-HK	PW CODE HOLDER		
△	121	LC21349-002A-HK	CARD BASE		
△	122	LC32346-003B-0K	JACK BASE		
	123	QUQ105-3008AH	FFC WIRE		
	124	QUQ105-3008AH	FFC WIRE		
△	125	LC32348-003A-0K	TUNER PWB BASE		
△	126	QLD0304-002	LCD PANEL MODULE		
	127	LC11633-002A-U	SP BOX		
	128	QAS0142-001	SPEAKER	SP01/SP02(x2)	
	129	LC21339-002A-U	DUCT BASE	(x2)	
	130	LC21340-002A-U	DUCT COVER	(x2)	
△	131	LC11688-003B-0K	FRONT PANEL ASSY	Inc.131A-131B	LT-32C31BJE,LT-32C31BUE
△	131	LC11688-005A-0K	FRONT PANEL ASSY	Inc.131A-131B	LT-32C31SJE,LT-32C31SUE
	131A	LC11692-001A	PUNCHING SHEET		
	131B	LC41739-001C	JVC MARK		
△	200	SMK0J602A-U2	RECEIVER PWB		
△	201	SMK0L601A-U2	FRONT CONTROL PWB		
△	202	SMK0L602A-U2	FRONT SENSOR PWB		
△	203	SMK-9613A-U2	REGULATOR PWB		
△	204	SMK-9603A-U2	POWER PWB		
△	205	SMK-1602A-U2	VIDEO PWB		
△	206	SMK0R602A-U2	TUNER PWB		
△	207	SMK0A602A-U2	MSP PWB		
△	208	SMK-0Z602A	MI-CON & DIST MODULE PWB		

# EXPLODED VIEW





# PRINTED WIRING BOARD PARTS LIST

## VIDEO P.W. BOARD ASS'Y (SMK-1602A-U2)

△Ref No.	Part No.	Part Name	Description	Local
IC801	TB1274AF	IC		
IC802	TC90A69AF-X	IC		
IC803	BA05FP-X	IC		
IC1101	AN15851A-W	IC		
IC1201	TA1370FG-X	IC		
IC1202	SN74AHC2G08T-X	IC		
Q801	2SA1037AK/QR/-X	TRANSISTOR		
Q802	2SA1037AK/QR/-X	TRANSISTOR		
Q803	2SC2412K/QR/-X	TRANSISTOR		
Q804	2SC2412K/QR/-X	TRANSISTOR		
Q805	2SC2412K/QR/-X	TRANSISTOR		
Q806	2SC2412K/QR/-X	TRANSISTOR		
Q807	2SC2412K/QR/-X	TRANSISTOR		
Q808	2SC2412K/QR/-X	TRANSISTOR		
Q853	2SC2412K/QR/-X	TRANSISTOR		
Q854	2SC2412K/QR/-X	TRANSISTOR		
Q855	2SC2412K/QR/-X	TRANSISTOR		
Q856	2SA1037AK/QR/-X	TRANSISTOR		
Q858	2SC2412K/QR/-X	TRANSISTOR		
Q859	2SC2412K/QR/-X	TRANSISTOR		
Q860	2SA1037AK/QR/-X	TRANSISTOR		
Q862	2SC2412K/QR/-X	TRANSISTOR		
Q863	2SC2412K/QR/-X	TRANSISTOR		
Q864	IMX1-XW	PAIR TRANSISTOR		
Q1101	2SC2412K/QR/-X	TRANSISTOR		
Q1102	2SC2412K/QR/-X	TRANSISTOR		
Q1103	2SC2412K/QR/-X	TRANSISTOR		
Q1111	2SC2412K/QR/-X	TRANSISTOR		
Q1112	2SC2412K/QR/-X	TRANSISTOR		
Q1113	2SC2412K/QR/-X	TRANSISTOR		
Q1201	2SC2412K/QR/-X	TRANSISTOR		
Q1202	2SC2412K/QR/-X	TRANSISTOR		
Q1203	2SC2412K/QR/-X	TRANSISTOR		
D1201	MA8100/M/-X	Z DIODE		
D1202	MA8100/M/-X	Z DIODE		
D1203	MA8100/M/-X	Z DIODE		
D1204	MA8100/M/-X	Z DIODE		
D1205	MA8100/M/-X	Z DIODE		
C801	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C802	NCF31CZ-224X	C CAPACITOR	0.22uF 16V Z	
C803	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C804	QETN1CM-476Z	E CAPACITOR	47uF 16V M	
C805	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C806	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C807	QETN1CM-476Z	E CAPACITOR	47uF 16V M	
C808	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C809	NCF11CZ-475X	C CAPACITOR	4.7uF 16V Z	
C810	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C811	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C812	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C813	QETN1CM-476Z	E CAPACITOR	47uF 16V M	
C814	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C815	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C816	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C817	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C818	QETN1CM-106Z	E CAPACITOR	100uF 16V M	
C819	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C820	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
C821	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C822	NCB11CK-225X	C CAPACITOR	2.2uF 16V K	
C823	NCB31HK-223X	C CAPACITOR	0.022uF 50V K	
C824	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C826	QETN1HM-226Z	E CAPACITOR	22uF 50V M	
C827	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C828	NCF31CZ-334X	C CAPACITOR	0.33uF 16V Z	
C829	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C830	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C831	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C832	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C833	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C834	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C835	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C849	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C850	NDC31HJ-180X	C CAPACITOR	18pF 50V J	
C851	NDC31HJ-560X	C CAPACITOR	56pF 50V J	
C852	NDC31HJ-560X	C CAPACITOR	56pF 50V J	
C853	QETN1CM-476Z	E CAPACITOR	47uF 16V M	
C854	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C855	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	

△Ref No.	Part No.	Part Name	Description	Local
C856	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C857	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C858	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C859	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
C860	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C861	NDC31HJ-681X	C CAPACITOR	680pF 50V J	
C862	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C863	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C864	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C865	NDC31HJ-560X	C CAPACITOR	56pF 50V J	
C866	NDC31HJ-560X	C CAPACITOR	56pF 50V J	
C867	QETN1CM-476Z	E CAPACITOR	47uF 16V M	
C868	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C869	NDC31HJ-560X	C CAPACITOR	56pF 50V J	
C870	NDC31HJ-560X	C CAPACITOR	56pF 50V J	
C871	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C872	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C873	NDC31HJ-330X	C CAPACITOR	33pF 50V J	
C874	NDC31HJ-150X	C CAPACITOR	15pF 50V J	
C875	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C876	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C877	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C878	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C879	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C880	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C881	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C882	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C883	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C884	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C885	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C886	QETN1CM-106Z	E CAPACITOR	10uF 16V M	
C887	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C888	QETN0JM-107Z	E CAPACITOR	100uF 6.3V M	
C889	QETN1CM-106Z	E CAPACITOR	10uF 16V M	
C890	QETN1CM-106Z	E CAPACITOR	10uF 16V M	
C891	QETN1CM-476Z	E CAPACITOR	47uF 16V M	
C892	NDC31HJ-180X	C CAPACITOR	18pF 50V J	
C893	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
C894	NDC31HJ-180X	C CAPACITOR	18pF 50V J	
C1101	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1102	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1103	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1104	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1105	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1106	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1107	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1108	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1109	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1110	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1111	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1112	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1113	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1114	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1115	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1116	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1119	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1120	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1121	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
C1122	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1123	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
C1124	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1201	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1202	QETN1HM-225Z	E CAPACITOR	2.2uF 50V M	
C1203	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
C1204	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C1205	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C1206	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1207	NCF11CZ-475X	C CAPACITOR	4.7uF 16V Z	
C1208	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
C1251	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1252	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C1253	QETN1CM-106Z	E CAPACITOR	10uF 16V M	
C1254	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
C1255	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
R801	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R802	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R803	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R804	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R805	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R806	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R807	NRSA63J-752X	MG RESISTOR	7.5kΩ 1/16W J	
R808	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R809	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	

(No.YA015) 3-7

△Ref No.	Part No.	Part Name	Description	Local	△Ref No.	Part No.	Part Name	Description	Local
R9801	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		D9545	RD16E/B/-T5	Z DIODE		
R9802	NRS12BJ-6R8W	MG RESISTOR	6.8Ω 1/2W J		D9546	RD16E/B/-T5	Z DIODE		
R9803	NRSA63D-152X	MG RESISTOR	1.5kΩ 1/16W D		D9901	RK44-LFT4	S B DIODE		
R9804	NRSA63D-152X	MG RESISTOR	1.5kΩ 1/16W D		D9902	MA111-X	SI DIODE		
R9807	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		D9903	EC30HA03L-X	SB DIODE		
R9808	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		D9904	MA111-X	SI DIODE		
R9809	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		D9905	PTZ16B-X	Z DIODE		
R9810	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J		△C9001	QFZ9073-225	MM CAPACITOR	2.2uF AC250V M	
R9811	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		△C9002	QFZ9075-105	MPP CAPACITOR	1uF AC275V M	
R9812	NRS12BJ-220W	MG RESISTOR	22Ω 1/2W J		△C9011	QCZ9079-102	C CAPACITOR	1000pF AC250V M	
R9813	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		△C9013	QCZ9079-102	C CAPACITOR	1000pF AC250V M	
R9815	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		△C9101	QCZ9078-472	C CAPACITOR	4700pF AC250V M	
R9816	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		△C9102	QCZ9078-472	C CAPACITOR	4700pF AC250V M	
R9817	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J		△C9103	QCZ9078-472	C CAPACITOR	4700pF AC250V M	
R9818	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		C9111	QEHQ2GM-226	E CAPACITOR	22uF 400V M	
R9819	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C9141	QECR1CM-477Z	E CAPACITOR	470uF 16V M	
R9820	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		C9142	QEHHR1AM-337Z	E CAPACITOR	330uF 10V M	
R9821	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		C9143	QEHHR1CM-107Z	E CAPACITOR	100uF 16V M	
R9823	NRSA63D-182X	MG RESISTOR	1.8kΩ 1/16W D		△C9197	QCZ9079-102	C CAPACITOR	1000pF AC250V M	
R9824	NRSA63D-153X	MG RESISTOR	15kΩ 1/16W D		△C9198	QCZ9079-222	C CAPACITOR	2200pF AC250V M	
R9825	NRSA63D-473X	MG RESISTOR	47kΩ 1/16W D		△C9201	QCZ9078-222	C CAPACITOR	2200pF AC250V M	
R9826	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		△C9203	QCZ9078-222	C CAPACITOR	2200pF AC250V M	
R9827	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J		△C9204	QCZ9078-222	C CAPACITOR	2200pF AC250V M	
R9828	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		△C9205	QCZ9078-222	C CAPACITOR	2200pF AC250V M	
R9829	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		C9211	QFZ0128-474	MPP CAPACITOR	0.47uF DC400V H	
R9830	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		C9212	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
R9831	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J		C9213	NCB21CK-684X	C CAPACITOR	0.68uF 16V K	
					C9214	NDC31HJ-102X	C CAPACITOR	1000pF 50V J	
L9802	NQL63EM-101X	COIL	100uH M		C9215	QEHHR1VM-476Z	E CAPACITOR	47uF 35V M	
L9804	NQL63EM-101X	COIL	100uH M		C9216	QEZ0650-227	E CAPACITOR	220uF 450V M	
L9806	NQL63EM-101X	COIL	100uH M		C9218	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
L9807	NQL80CL-100X	COIL	10uH L		C9501	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
CN1001	QGB2501K2-13	CONNECTOR	B-B (1-13)		C9502	NDC31HJ-221X	C CAPACITOR	220pF 50V J	
K9801	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J		C9503	QFP32JK-332	PP CAPACITOR	3300pF 630V K	
K9802	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J		C9504	QFP32JK-332	PP CAPACITOR	3300pF 630V K	
K9803	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J		C9505	QCZ0340-331	C CAPACITOR	330pF 2kV K	
					C9506	QCZ0340-331	C CAPACITOR	330pF 2kV K	
					C9508	NDC31HJ-471X	C CAPACITOR	470pF 50V J	
					C9509	QEHHR1HM-476Z	E CAPACITOR	47uF 50V M	
					C9510	QEHHR1HM-107Z	E CAPACITOR	100uF 50V M	
					C9511	QEHHR1HM-475Z	E CAPACITOR	4.7uF 50V M	
					C9512	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
					C9541	QCZ0340-681	C CAPACITOR	680pF 2kV K	
					C9543	QECR1EM-687Z	E CAPACITOR	680uF 25V M	
					C9544	QECR1EM-687Z	E CAPACITOR	680uF 25V M	
					C9545	QEHHR2AM-106Z	E CAPACITOR	10uF 100V M	
					C9546	QCZ0340-681	C CAPACITOR	680pF 2kV K	
					C9547	QCZ0340-681	C CAPACITOR	680pF 2kV K	
					C9548	QECQ1EM-188	E CAPACITOR	1800uF 25V M	
					C9549	QECQ1EM-188	E CAPACITOR	1800uF 25V M	
					C9550	QECQ1EM-188	E CAPACITOR	1800uF 25V M	
					C9551	QECQ1EM-188	E CAPACITOR	1800uF 25V M	
					C9552	QEHHR1HM-106Z	E CAPACITOR	10uF 50V M	
					C9553	QEHHR1HM-107Z	E CAPACITOR	100uF 50V M	
					C9554	NCB31HK-104X	C CAPACITOR	0.1uF 50V K	
					C9901	NBZ0017-106X	SP E CAPACITOR	10uF 25V M	
					C9903	QECR1AM-128Z	E CAPACITOR	1200uF 10V M	
					C9905	NBZ0017-106X	SP E CAPACITOR	10uF 25V M	
					C9906	QEZ0255-128	E CAPACITOR	1200uF 16V M	
					C9908	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
					C9910	QEHHR1HM-476Z	E CAPACITOR	47uF 50V M	
					C9911	QEZ0256-128	E CAPACITOR	1200uF 10V M	
					C9912	QECR1CM-477Z	E CAPACITOR	470uF 16V M	

## POWER P.W. BOARD ASS'Y (SMK-9603A-U2)

△Ref No.	Part No.	Part Name	Description	Local
△IC9211	MC33262D-X	IC		
△IC9501	STR-F6268S-F3	IC		
△IC9541	SE015N-LF12	IC		
IC9901	SI-8033S/F1	IC		
IC9902	PQ1CG2032FZ	IC		
Q9021	UN2211-X	TRANSISTOR		
Q9211	2SK2196	POWER MOS FET		
Q9212	2SC3928A/QR/-X	TRANSISTOR		
Q9213	IMD3A-W	DIGI TRANSISTOR		
Q9215	2SC3928A/QR/-X	TRANSISTOR		
Q9502	2SC3928A/QR/-X	TRANSISTOR		
Q9541	UN2213-X	DIGI TRANSISTOR		
Q9901	2SC3928A/QR/-X	TRANSISTOR		
Q9902	2SC3928A/QR/-X	TRANSISTOR		
Q9903	UN2213-X	DIGI TRANSISTOR		
Q9904	2SC3928A/QR/-X	TRANSISTOR		
Q9905	2SC3928A/QR/-X	TRANSISTOR		
Q9906	UN2213-X	DIGI TRANSISTOR		
D9021	MA111-X	SI DIODE		
D9111	S1WB/A/60-4101	BRIDGE DIODE		
△D9201	D25XB60	BRIDGE DIODE		
D9202	MA111-X	SI DIODE		
D9211	D5L60	SI DIODE		
D9213	MA111-X	SI DIODE		
D9214	MA111-X	SI DIODE		
D9501	RD12E/B2/-T5	Z DIODE		
D9502	RD33E/B/-T5	Z DIODE		
D9503	RD5.1E/B2/-T5	Z DIODE		
D9504	SARS01-T2	SI DIODE		
D9505	SARS01-T2	SI DIODE		
D9506	D1FL20U-X	SI DIODE		
D9507	PG104RS-T2	FR DIODE		
D9509	D1FS4-X	SB DIODE		
D9510	D1FS4-X	SB DIODE		
D9511	MA111-X	SI DIODE		
D9513	MA111-X	SI DIODE		
D9541	FME-220A	SB DIODE		
D9542	EU2-T3	SI DIODE		
D9543	FME-220A	SB DIODE		
D9544	FME-220A	SB DIODE		

△R9001	QRZ9046-105Z	C RESISTOR	1MΩ 1/2W K
R9101	QRZ0216-4R7	UNF WW RESISTOR	4.7Ω 7W K
R9199	QRZ0111-685	C RESISTOR	6.8MΩ 1/2W K
△R9201	QRZ9055-8R2	UNF WW RESISTOR	8.2Ω
R9203	QRL029J-561	OMF RESISTOR	560Ω 2W J
R9211	NRS12BJ-474W	MG RESISTOR	470kΩ 1/2W J
R9212	NRS12BJ-474W	MG RESISTOR	470kΩ 1/2W J
R9213	NRS12BJ-334W	MG RESISTOR	330kΩ 1/2W J
R9214	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J
R9215	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J
R9216	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J
R9217	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J
R9218	NRSA63D-103X	MG RESISTOR	10kΩ 1/16W D
R9219	NRS12BJ-223W	MG RESISTOR	22kΩ 1/2W J
R9220	QRM059J-R15	MP RESISTOR	0.15Ω 5W J
R9221	QRM059J-R27	MP RESISTOR	0.27Ω 5W J
R9222	NRS12BJ-334W	MG RESISTOR	330kΩ 1/2W J
R9223	NRS12BJ-334W	MG RESISTOR	330kΩ 1/2W J
R9224	NRS12BJ-394W	MG RESISTOR	390kΩ 1/2W J
R9225	NRS12BJ-334W	MG RESISTOR	330kΩ 1/2W J
R9226	NRS12BJ-334W	MG RESISTOR	330kΩ 1/2W J
R9227	NRS12BJ-394W	MG RESISTOR	390kΩ 1/2W J

△Ref No.	Part No.	Part Name	Description	Local
R9228	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R9233	NRS12BJ-474W	MG RESISTOR	470kΩ 1/2W J	
R9236	NRS12BJ-474W	MG RESISTOR	470kΩ 1/2W J	
R9237	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R9501	QRL039J-333	OMF RESISTOR	33kΩ 3W J	
R9502	QRL039J-333	OMF RESISTOR	33kΩ 3W J	
R9503	NRS12BJ-224W	MG RESISTOR	220kΩ 1/2W J	
R9504	NRS12BJ-224W	MG RESISTOR	220kΩ 1/2W J	
R9505	QRL039J-220	OMF RESISTOR	22Ω 3W J	
R9506	QRL039J-220	OMF RESISTOR	22Ω 3W J	
R9507	QRM059J-R15	MP RESISTOR	0.15Ω 5W J	
R9508	QRT029J-1R5	MF RESISTOR	1.5Ω 2W J	
△R9509	QRZ9009-1R5	FUSI RESISTOR	1.5Ω 1/2W J	
R9512	QRK126J-152X	UNF C RESISTOR	1.5kΩ 1/2W J	
R9513	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R9514	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J	
R9515	QRK126J-221X	UNF C RESISTOR	220Ω 1/2W J	
R9516	NRS12BJ-332W	MG RESISTOR	3.3kΩ 1/2W J	
R9517	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R9518	NRS12BJ-100W	MG RESISTOR	10Ω 1/2W J	
R9519	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R9541	QRL029J-152	OMF RESISTOR	1.5kΩ 2W J	
R9542	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R9544	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R9545	QRL029J-331	OMF RESISTOR	330Ω 2W J	
R9546	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R9626	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R9902	NRS12BJ-220W	MG RESISTOR	22Ω 1/2W J	
R9903	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R9905	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R9906	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R9907	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R9908	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R9909	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R9910	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R9911	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R9912	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R9913	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R9915	NRSA63D-102X	MG RESISTOR	1kΩ 1/16W D	
R9916	NRSA63D-103X	MG RESISTOR	10kΩ 1/16W D	
R9918	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R9919	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R9920	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R9921	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R9922	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R9923	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
L9141	NQL52EN-4R7X	COIL	4.7uH N	
L9201	QQR1399-001	CHOKE COIL		
L9541	NQL52EM-220X	COIL	22uH M	
L9902	QQR1401-001	CHOKE COIL		
L9904	NQL63EM-470X	COIL	47uH M	
L9905	NQL80CL-100X	COIL	10uH L	
△T9121	QAL0515-001	POWER TRANSF		
△T9541	QQS0222-001	SW TRANSF		
CN0001	QGB2501J1-13	CONNECTOR	B-B (1-13)	
CN000A	QGA2001C2-13V	CONNECTOR	W-B (1-13)	
CN000B	QGA1501C2-13V	CONNECTOR	W-B (1-13)	
CN000F	QGA2001C2-04V	CONNECTOR	W-B (1-4)	
CN000G	QGA1501C2-10V	CONNECTOR	W-B (1-10)	
CN000P	QGA1201C2-15X	CONNECTOR	W-B (1-15)	
CN000Q	QGA1201C2-15X	CONNECTOR	W-B (1-15)	
CN000Y	QGA2001C2-02V	CONNECTOR	W-B (1-2)	
CN000Z	QGA2001C2-02V	CONNECTOR	W-B (1-2)	
CN00PW	QGA7901C1-02	CONNECTOR	W-B (1-2)	
△CP9121	QMFZ043-2R0Z-J1	FUSE	2A AC250V	
△CP9211	QMFZ043-5R0Z-J1	FUSE	5A AC250V	
△F9001	QMF51D2-6R3-J1	FUSE	6.3A AC250V	
H9211	LC32378-001A	HEAT SINK/AL-F/		
H9541	LC32377-001A	HEAT SINK/AL-F/		
H9901	CM42862-A0A	HEAT SINK ASSY		
H9902	LC31334-002A	HEAT SINK/AL-F/		
K9001	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
K9501	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
K9502	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
K9503	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
K9504	QQR0621-002Z	FERRITE BEADS		
K9505	QQR0621-002Z	FERRITE BEADS		
K9541	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
K9542	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
K9543	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
K9544	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
K9545	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
K9901	NQR0413-003X	FERRITE BEADS		
△LF9001	QQR1281-004	LINE FILTER		
△LF9002	QQR1281-004	LINE FILTER		

△Ref No.	Part No.	Part Name	Description	Local
△LF9003	QQR1376-001	LINE FILTER		
△PC9541	PC123Y22FZ	PHOTO COUPLER		
△PC9542	PC123Y22FZ	PHOTO COUPLER		
△RY9021	QSK0119-001	RELAY		
△RY9201	QSK0117-001	RELAY		
△VA9001	ERZV10V621CS	ZNR		

## MSP P.W. BOARD ASS'Y (SMK0A602A-U2)

△Ref No.	Part No.	Part Name	Description	Local
IC501	MSP3415DQGB3GHX	IC		
IC502	AN77L08-T	IC		
Q502	2SC2412K/QR/-X	TRANSISTOR		
Q503	DTC144EKA-X	DIGI TRANSISTOR		
C502	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C507	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C508	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C509	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C510	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C511	NDC31HJ-2R0X	C CAPACITOR	2pF 50V J	
C512	NDC31HJ-2R0X	C CAPACITOR	2pF 50V J	
C513	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C514	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
C515	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C516	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C517	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
C522	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C523	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
C524	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
C525	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C526	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
C527	NDC31HJ-102X	C CAPACITOR	1000pF 50V J	
C528	NDC31HJ-102X	C CAPACITOR	1000pF 50V J	
C529	NDC31HJ-102X	C CAPACITOR	1000pF 50V J	
C530	NDC31HJ-102X	C CAPACITOR	1000pF 50V J	
C531	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C532	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C533	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
C534	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C535	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C536	QENC1EM-106Z	BP E CAPACITOR	10uF 25V M	
C537	QENC1EM-106Z	BP E CAPACITOR	10uF 25V M	
C541	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
C542	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C543	NCB31HK-104X	C CAPACITOR	0.1uF 50V K	
R506	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R507	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R516	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R517	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R518	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R519	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R522	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
L503	QRN143J-0R0X	C RESISTOR	0Ω 1/4W J	
L504	QQL244K-4R7Z	PEAKING COIL	4.7uH K	
L505	QQL244K-4R7Z	PEAKING COIL	4.7uH K	
CN0AL	QGA1501C2-09V	CONNECTOR	W-B (1-9)	
CN0004	QGB2038K1-09	CONNECTOR	B-B (1-9)	
CN0005	QGB2038K1-09	CONNECTOR	B-B (1-9)	
CN00AM	QGA1501C2-11V	CONNECTOR	W-B (1-11)	
K501	NQR0389-003X	FERRITE BEADS		
K502	NQR0389-003X	FERRITE BEADS		
LC501	NQR0431-001X	EMI FILTER	0.22uF 50V Z	
X501	QAX0773-001Z	CRYSTAL	18.432000MHz	

## RECEIVER P.W. BOARD ASS'Y (SMK0J602A-U2)

△Ref No.	Part No.	Part Name	Description	Local
IC101	CXA2069Q	IC		
IC401	CXA1875AM-X	IC		
IC6101	AN77L12-T	IC		
IC6401	TA8119P	IC		
IC6501	NJW1137M-W	IC		
IC6531	RC4558D-X	IC		
IC6551	RC4558D-X	IC		
IC6641	TA2024ASE-X	IC		
IC6701	M62320FP-X	IC		



△Ref No.	Part No.	Part Name	Description	Local	△Ref No.	Part No.	Part Name	Description	Local
Q101	2SC2412K/QR/-X	TRANSISTOR			C105	QETN1CM-477Z	E CAPACITOR	470uF 16V M	
Q102	2SC2412K/QR/-X	TRANSISTOR			C115	QETN1CM-477Z	E CAPACITOR	470uF 16V M	
Q103	2SA1037AK/QR/-X	TRANSISTOR			C125	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
Q104	DTC323TK-X	DIGI TRANSISTOR			C131	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
Q105	DTC323TK-X	DIGI TRANSISTOR			C132	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q106	2SC1740S/QR/-T	TRANSISTOR			C133	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q131	2SA933AS/QR/-T	TRANSISTOR			C141	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q136	DTC323TK-X	DIGI TRANSISTOR			C142	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
Q137	DTC323TK-X	DIGI TRANSISTOR			C143	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q138	2SA1037AK/QR/-X	TRANSISTOR			C144	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
Q211	2SC2412K/QR/-X	TRANSISTOR			C145	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q212	2SC2412K/QR/-X	TRANSISTOR			C146	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q221	2SC2412K/QR/-X	TRANSISTOR			C147	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
Q222	2SC2412K/QR/-X	TRANSISTOR			C148	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
Q231	2SC2412K/QR/-X	TRANSISTOR			C149	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q232	2SC2412K/QR/-X	TRANSISTOR			C150	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q233	DTC323TK-X	DIGI TRANSISTOR			C151	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
Q234	DTC323TK-X	DIGI TRANSISTOR			C152	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
Q311	UN2226-X	DIGI TRANSISTOR			C153	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q312	UN2226-X	DIGI TRANSISTOR			C170	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q313	UN2110-X	DIGI TRANSISTOR			C171	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q314	2SA1530A/QR/-X	SI TRANSISTOR			C172	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
Q411	2SC3928A/QR/-X	TRANSISTOR			C173	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q412	2SC3928A/QR/-X	TRANSISTOR			C174	QETN1CM-477Z	E CAPACITOR	470uF 16V M	
Q6401	UN2110-X	DIGI TRANSISTOR			C177	QENC1EM-106Z	BP E CAPACITOR	10uF 25V M	
Q6402	UN2226-X	DIGI TRANSISTOR			C178	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
Q6501	2SC3928A/QR/-X	TRANSISTOR			C179	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q6502	2SC3928A/QR/-X	TRANSISTOR			C182	QENC1EM-106Z	BP E CAPACITOR	10uF 25V M	
Q6503	2SA1530A/QR/-X	SI TRANSISTOR			C184	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q6504	2SC3928A/QR/-X	TRANSISTOR			C185	QETN1HM-476Z	E CAPACITOR	47uF 50V M	
Q6505	2SC3928A/QR/-X	TRANSISTOR			C190	QETN1CM-107Z	E CAPACITOR	100uF 16V M	
Q6506	2SA1530A/QR/-X	SI TRANSISTOR			C191	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
Q6551	2SC3928A/QR/-X	TRANSISTOR			C192	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
Q6552	2SC3928A/QR/-X	TRANSISTOR			C193	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
Q6581	2SC3928A/QR/-X	TRANSISTOR			C194	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
Q6582	2SA1530A/QR/-X	SI TRANSISTOR			C195	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
Q6591	DTC323TK-X	DIGI TRANSISTOR			C196	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
Q6592	DTC323TK-X	DIGI TRANSISTOR			C197	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q6593	2SA1530A/QR/-X	SI TRANSISTOR			C214	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
Q6601	2SC3928A/QR/-X	TRANSISTOR			C221	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
Q6701	2SC3928A/QR/-X	TRANSISTOR			C222	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
Q6702	2SA1530A/QR/-X	SI TRANSISTOR			C223	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
Q6703	2SC3928A/QR/-X	TRANSISTOR			C224	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
Q6704	2SC3928A/QR/-X	TRANSISTOR			C225	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
Q6705	2SA1530A/QR/-X	SI TRANSISTOR			C226	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
D101	MA3056/M/-X	Z DIODE			C251	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
D102	MA3056/M/-X	Z DIODE			C305	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
D103	MA3056/M/-X	Z DIODE			C306	NCB31HK-152X	C CAPACITOR	1500pF 50V K	
D104	MA3056/M/-X	Z DIODE			C307	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
D105	MA3056/M/-X	Z DIODE			C308	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
D131	MA3120/M/-X	Z DIODE			C309	NCB11CK-225X	C CAPACITOR	2.2uF 16V K	
D164	MA3120/M/-X	Z DIODE			C310	NCB21CK-105X	C CAPACITOR	1uF 16V K	
D201	MA3039/H/-X	Z DIODE			C311	NCB11CK-225X	C CAPACITOR	2.2uF 16V K	
D202	MA3056/M/-X	Z DIODE			C312	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
D203	MA3056/M/-X	Z DIODE			C313	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
D204	MA3056/M/-X	Z DIODE			C314	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
D205	MA3056/M/-X	Z DIODE			C343	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
D206	MA3039/H/-X	Z DIODE			C344	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
D207	MA3056/M/-X	Z DIODE			C401	QETN1CM-476Z	E CAPACITOR	47uF 16V M	
D301	MA8100/M/-X	Z DIODE			C411	QENC1EM-106Z	BP E CAPACITOR	10uF 25V M	
D302	MA8100/M/-X	Z DIODE			C412	QENC1EM-106Z	BP E CAPACITOR	10uF 25V M	
D303	MA8100/M/-X	Z DIODE			C6101	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
D305	MA8100/M/-X	Z DIODE			C6102	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
D310	MA111-X	SI DIODE			C6103	QETN1EM-476Z	E CAPACITOR	47uF 25V M	
D311	MA111-X	SI DIODE			C6104	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
D6401	1SR35-400A-T2	SI DIODE			C6401	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
D6541	MA8062/M/-X	Z DIODE			C6402	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
D6561	MA111-X	SI DIODE			C6403	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	
D6562	MA111-X	SI DIODE			C6404	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	
D6571	MA111-X	SI DIODE			C6405	QETN1AM-227Z	E CAPACITOR	220uF 10V M	
D6572	MA111-X	SI DIODE			C6406	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
D6573	MA111-X	SI DIODE			C6407	QETN1AM-227Z	E CAPACITOR	220uF 10V M	
D6574	MA111-X	SI DIODE			C6408	QETN1AM-227Z	E CAPACITOR	220uF 10V M	
D6581	MA111-X	SI DIODE			C6409	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
D6582	MA111-X	SI DIODE			C6410	QETN1HM-105Z	E CAPACITOR	1uF 50V M	
D6583	MA111-X	SI DIODE			C6501	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
D6584	MA111-X	SI DIODE			C6502	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
D6585	MA111-X	SI DIODE			C6503	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	
D6641	D1FS4-X	SB DIODE			C6504	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M	
D6642	D1FS4-X	SB DIODE			C6505	NCB31HK-332X	C CAPACITOR	3300pF 50V K	
D6643	D1FS4-X	SB DIODE			C6506	NCB31HK-332X	C CAPACITOR	3300pF 50V K	
D6644	D1FS4-X	SB DIODE			C6507	NCB31HK-333X	C CAPACITOR	0.033uF 50V K	
D6701	MA111-X	SI DIODE			C6508	NCB31HK-333X	C CAPACITOR	0.033uF 50V K	
D6702	MA111-X	SI DIODE			C6509	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
					C6510	NCB31HK-472X	C CAPACITOR	4700pF 50V K	
					C6511	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
					C6512	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	

△Ref No.	Part No.	Part Name	Description	Local	△Ref No.	Part No.	Part Name	Description	Local
C6513	QETN1HM-225Z	E CAPACITOR	2.2uF 50V M		R133	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
C6514	QETN1HM-225Z	E CAPACITOR	2.2uF 50V M		R134	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6515	QETN1EM-476Z	E CAPACITOR	47uF 25V M		R135	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C6516	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R136	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
C6517	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M		R137	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C6518	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M		R138	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
C6519	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M		R139	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C6520	QETN1HM-105Z	E CAPACITOR	1uF 50V M		R141	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6521	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R142	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6522	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M		R143	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6523	QETN1HM-475Z	E CAPACITOR	4.7uF 50V M		R144	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6524	QETN1CM-476Z	E CAPACITOR	47uF 16V M		R145	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6526	QETN1CM-476Z	E CAPACITOR	47uF 16V M		R146	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6531	QETN1HM-105Z	E CAPACITOR	1uF 50V M		R147	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6532	QETN1HM-105Z	E CAPACITOR	1uF 50V M		R148	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6533	QETN1EM-476Z	E CAPACITOR	47uF 25V M		R149	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6534	NDC31HJ-100X	C CAPACITOR	10pF 50V J		R150	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6535	NDC31HJ-100X	C CAPACITOR	10pF 50V J		R151	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6541	QETN1EM-476Z	E CAPACITOR	47uF 25V M		R152	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6551	NCB31CK-683X	C CAPACITOR	0.068uF 16V K		R153	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6552	NCB31CK-683X	C CAPACITOR	0.068uF 16V K		R154	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6553	NCB31CK-683X	C CAPACITOR	0.068uF 16V K		R155	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6554	NCB31CK-683X	C CAPACITOR	0.068uF 16V K		R175	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
C6555	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R176	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
C6556	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R177	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C6557	QETN1EM-476Z	E CAPACITOR	47uF 25V M		R178	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
C6561	QETN1HM-105Z	E CAPACITOR	1uF 50V M		R179	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
C6563	QETN1HM-225Z	E CAPACITOR	2.2uF 50V M		R180	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
C6571	NCB11EK-105X	C CAPACITOR	1uF 25V K		R181	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C6572	NCB11EK-105X	C CAPACITOR	1uF 25V K		R182	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6573	NCB11EK-105X	C CAPACITOR	1uF 25V K		R183	QRK126J-151X	UNF C RESISTOR	150Ω 1/2W J	
C6574	NCB11EK-105X	C CAPACITOR	1uF 25V K		R184	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
C6575	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R185	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6576	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R186	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C6577	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R187	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6578	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R188	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C6581	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R189	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C6582	QETN1EM-476Z	E CAPACITOR	47uF 25V M		R190	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C6583	QETN1HM-105Z	E CAPACITOR	1uF 50V M		R191	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C6591	NDC31HJ-101X	C CAPACITOR	100pF 50V J		R192	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C6592	NDC31HJ-101X	C CAPACITOR	100pF 50V J		R193	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6593	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R194	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C6602	QETN1EM-337Z	E CAPACITOR	330uF 25V M		R211	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C6603	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R212	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C6604	QETN1EM-337Z	E CAPACITOR	330uF 25V M		R213	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
C6605	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R214	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
C6606	NCB11EK-105X	C CAPACITOR	1uF 25V K		R215	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
C6607	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R216	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C6608	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R217	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C6610	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R218	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C6611	NCB11EK-105X	C CAPACITOR	1uF 25V K		R221	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
C6612	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R222	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C6613	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R223	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
C6614	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R224	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
C6621	NCB11EK-105X	C CAPACITOR	1uF 25V K		R225	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
C6622	NCB11EK-105X	C CAPACITOR	1uF 25V K		R226	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
C6623	NDC31HJ-121X	C CAPACITOR	120pF 50V J		R227	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J	
C6624	NDC31HJ-121X	C CAPACITOR	120pF 50V J		R228	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C6641	NCB21EK-224X	C CAPACITOR	0.22uF 25V K		R231	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C6642	NCB21EK-224X	C CAPACITOR	0.22uF 25V K		R232	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C6643	NCB21EK-224X	C CAPACITOR	0.22uF 25V K		R234	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
C6644	NCB21EK-224X	C CAPACITOR	0.22uF 25V K		R235	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
C6645	NCB31HK-104X	C CAPACITOR	0.1uF 50V K		R236	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C6646	NCB31HK-104X	C CAPACITOR	0.1uF 50V K		R237	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C6647	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R241	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C6648	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R242	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C6701	NCB11CK-225X	C CAPACITOR	2.2uF 16V K		R258	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C6702	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R260	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C6703	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R271	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
C6704	NCB11EK-105X	C CAPACITOR	1uF 25V K		R272	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
C6705	QETN1HM-106Z	E CAPACITOR	10uF 50V M		R273	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
					R274	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R101	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R275	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R102	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R301	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R103	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R302	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R104	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R303	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J	
R111	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R304	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R112	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R305	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R113	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R306	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R114	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R307	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J	
R115	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R308	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R116	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R309	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R117	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R310	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R118	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R311	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R119	NRSA63J-750X	MG RESISTOR	75Ω 1/16W J		R312	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R131	QRG01GJ-101	OMF RESISTOR	100Ω 1W J		R313	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
R132	QRK126J-181X	UNF C RESISTOR	180Ω 1/2W J		R315	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	

△Ref No.	Part No.	Part Name	Description	Local	△Ref No.	Part No.	Part Name	Description	Local
R316	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J		R6587	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R341	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R6588	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R342	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R6591	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R343	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R6592	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R344	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		R6593	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R401	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R6594	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R402	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R6597	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R403	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6601	NRSA63D-822X	MG RESISTOR	8.2kΩ 1/16W D	
R411	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6604	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R412	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6606	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R413	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R6621	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R414	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R6622	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J	
R415	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6623	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R416	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6624	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R417	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R6641	QRK126J-100X	UNF C RESISTOR	10Ω 1/2W J	
R418	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R6642	QRK126J-100X	UNF C RESISTOR	10Ω 1/2W J	
R6101	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6701	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6102	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6702	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6103	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6703	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6104	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6704	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R6105	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6705	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6106	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6706	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6107	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6707	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6108	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R6708	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6401	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6709	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6402	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6710	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6403	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R6717	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6404	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R6718	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6406	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R6719	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R6407	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6720	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R6408	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J		R6723	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6409	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R6724	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6501	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R6725	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6502	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R6727	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J	
R6503	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R6728	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6504	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R6729	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R6505	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R6730	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R6506	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R6731	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6507	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R6732	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6508	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R6733	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R6509	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R6734	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R6510	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R6735	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R6511	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		L6641	QQL28AM-100	COIL	10uH M	
R6512	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		L6642	QQL28AM-100	COIL	10uH M	
R6513	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		L6643	QQL28AM-100	COIL	10uH M	
R6514	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		L6644	QQL28AM-100	COIL	10uH M	
R6515	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J						
R6516	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		CN000F	QGA2001C2-04V	CONNECTOR	W-B (1-4)	
R6517	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		CN000G	QGA1501C2-10V	CONNECTOR	W-B (1-10)	
R6518	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		CN000J	QGA1501C2-06V	CONNECTOR	W-B (1-6)	
R6531	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		CN000K	QGA1501C2-07V	CONNECTOR	W-B (1-7)	
R6532	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		CN000N	QGA1501C2-07V	CONNECTOR	W-B (1-7)	
R6533	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		CN000S	QGA2501C5-06Z	CONNECTOR	W-B (1-6)	
R6534	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		CN000U	QGA1501C2-04V	CONNECTOR	W-B (1-4)	
R6535	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		CN00AD	QGA1501C2-08V	CONNECTOR	W-B (1-8)	
R6536	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J		CN00AE	QGA1501C2-07V	CONNECTOR	W-B (1-7)	
R6541	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J		CN00AL	QGA1501C2-09V	CONNECTOR	W-B (1-9)	
R6551	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J		J101	QNZ0463-001	21P CONNECTOR	EXT-1	
R6552	NRSA63J-184X	MG RESISTOR	180kΩ 1/16W J		J201	QNZ0463-001	21P CONNECTOR	EXT-2	
R6553	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J		J301	QND0102-001	S JACK	EXT-3 S IN	
R6554	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J		J302	QNN0370-001	PIN JACK	EXT-3 V/L/R IN	
R6555	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		J401	QNN0595-001	PIN JACK	EXT-3A_OUT L/R IN	
R6556	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		K101	CE42681-001Y	CHIP BEADS CORE		
R6557	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		K102	CE42681-001Y	CHIP BEADS CORE		
R6558	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		K201	CE42681-001Y	CHIP BEADS CORE		
R6559	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		K202	CE42681-001Y	CHIP BEADS CORE		
R6560	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		K6101	NQR0413-002X	FERRITE BEADS		
R6561	NRSA63J-124X	MG RESISTOR	120kΩ 1/16W J		K6591	NQR0413-002X	FERRITE BEADS		
R6562	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		K6592	NQR0413-002X	FERRITE BEADS		
R6563	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J		K6641	NQR0413-002X	FERRITE BEADS		
R6564	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		K6642	NQR0413-002X	FERRITE BEADS		
R6565	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J		K6643	NQR0413-002X	FERRITE BEADS		
R6571	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		K6644	NQR0413-002X	FERRITE BEADS		
R6572	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J		TH6601	NAD0035-471X	P THERMISTOR	470Ω	
R6573	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J						
R6574	NRSA63J-183X	MG RESISTOR	18kΩ 1/16W J						
R6575	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J						
R6576	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J						
R6577	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J						
R6578	NRSA63J-822X	MG RESISTOR	8.2kΩ 1/16W J						
R6579	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J						
R6581	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J						
R6582	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J						
R6583	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J						
R6584	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J						
R6585	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J						
R6586	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J						

## FRONT SENSOR P.W. BOARD ASS'Y (SMK0L602A-U2)

△Ref No.	Part No.	Part Name	Description	Local
IC8752	GP1UM281QK	IR DETECT UNIT		38kHz
C8752	QETN1CM-476Z	E CAPACITOR		47uF 16V M

△Ref No.	Part No.	Part Name	Description	Local
R8756	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8757	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R8759	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
CN8003	QGB2542J1-08	CONNECTOR	B-B (1-8)	

### FRONT CONTROL P.W. BOARD ASS'Y (SMK0L601A-U2)

△Ref No.	Part No.	Part Name	Description	Local
Q8701	UN2212-X	TRANSISTOR		
Q8702	UN2212-X	TRANSISTOR		
D6411	MA8062/M/-X	Z DIODE		
D6412	MA8062/M/-X	Z DIODE		
D6413	MA8062/M/-X	Z DIODE		
D8702	LSR22440-T16	LED	POWER	
C6411	QETN1AM-227Z	E CAPACITOR	220uF 10V M	
C6412	QETN1AM-227Z	E CAPACITOR	220uF 10V M	
C6413	NDC31HJ-102X	C CAPACITOR	1000pF 50V J	
C6414	NDC31HJ-102X	C CAPACITOR	1000pF 50V J	
C6415	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C6416	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
R6411	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6414	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R6415	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6416	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R6417	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R8701	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R8702	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R8703	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R8704	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R8711	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R8712	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R8713	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R8714	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
CN3003	QGB2542K1-08	CONNECTOR	B-B (1-8)	
CN300T	QGA1501C2-10V	CONNECTOR	W-B (1-10)	
CN300U	QGA1501C2-04V	CONNECTOR	W-B (1-4)	
J6401	QMS3004-C01	H.P.JACK	HEADPHONE	
S8701	QSW0797-001	TACT SWITCH	CH+	
S8702	QSW0797-001	TACT SWITCH	CH-	
S8703	QSW0797-001	TACT SWITCH	VOL+	
S8704	QSW0797-001	TACT SWITCH	VOL-	
S8705	QSW0797-001	TACT SWITCH	TV/AV	
S8706	QSW0797-001	TACT SWITCH	MENU/OK	
S8707	QSW0797-001	TACT SWITCH	POWER	

### TUNER P.W. BOARD ASS'Y (SMK0R602A-U2)

△Ref No.	Part No.	Part Name	Description	Local
C001	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
C002	NCB11AK-106X	C CAPACITOR	10uF 10V K	
C004	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C005	QETN0JM-108Z	E CAPACITOR	1000uF 6.3V M	
C006	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C007	QETN1HM-106Z	E CAPACITOR	10uF 50V M	
C008	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C009	QETN0JM-108Z	E CAPACITOR	1000uF 6.3V M	
C010	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C013	QETN0JM-108Z	E CAPACITOR	1000uF 6.3V M	
C015	NCB31HK-333X	C CAPACITOR	0.033uF 50V K	
R002	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R003	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R004	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R005	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R012	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R013	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
L001	NQL034K-220X	P COIL	22uH K	
L002	NQL034K-100X	COIL	10uH K	
L003	NQL034K-100X	COIL	10uH K	
CN004	QGB2038J1-09	CONNECTOR	B-B (1-9)	
CN005	QGB2038J1-09	CONNECTOR	B-B (1-9)	
TU001	QAU0188-004	TUNER		

### MI-COM & DIST MODULE P.W. BOARD ASS'Y (SMK-0Z602A)

△Ref No.	Part No.	Part Name	Description	Local
IC001	SDA6000-B12	IC		128pin
IC002	S-80828CNNB-W	IC		
IC003	K4S641632H-TC75	IC(DIGITAL)		
IC004	MBV160-32C31UE	IC(MICRO C ROM)		(SERVICE)
IC006	AT24C64-32C31UE	IC		(SERVICE)
IC007	TC7WH126FU-X	IC		
IC008	PQ2L3252MS-X	IC		
IC301	R1170H251B-X	IC		
IC302	UPD64083GF	IC		100pin
IC401	JCC5056A	IC		256pin
IC404	LC4128V-75T100C	IC		100pin
IC701	TB1274AF	IC		
IC702	TC90A69AF-X	IC		
IC703	TC4053BF/N/-XE	IC		
IC704	BA05FP-X	IC		
IC1201	TC90A90FG	IC		100pin
IC1202	MSM514265E-60TS	IC		
IC1203	TC7WH34FU-X	IC		
IC1204	TLC2932IPW-X	IC		
IC1205	TC4053BF/N/-XE	IC		
IC1206	BU2098F-X	IC		
IC1207	TC7WH157FU-X	IC		
IC1208	TC7WH157FU-X	IC		
IC1901	PQ070XH02Z-W	IC		
IC1904	PQ033DZ01Z-X	IC		
IC4001	AD80058	IC		100pin
IC4013	TC7WH34FU-X	IC		
IC4101	TMC57128GJG	IC		264pin
IC4102	HY5DU283222AQ-5	IC		100pin
IC4103	MBV400TC90PFN42	IC(MICRO C ROM)		
IC4104	SN74AHC2G74T-X	IC		
IC4105	TC7S08F-X	IC(DIGITAL)		
IC4106	S-80828CLNB-W	IC		
IC4107	LP3964EMP-ADJ-X	IC		
IC4108	LP3964EMP-ADJ-X	IC		
IC4201	JCC5054	IC		256pin
IC4203	R1170H151B-X	IC		
IC7301	MN82860	IC		208pin
IC7601	THC63LVD83R-W	IC		
IC7805	AT24C08-32C31UE	IC		(SERVICE)
IC7807	HD6433684A35FP	IC(MCU)		
IC7809	S-80828CLNB-W	IC		
Q001	2SC2712/YG/-X	TRANSISTOR		
Q003	2SC2712/YG/-X	TRANSISTOR		
Q004	DTC124EKA-X	DIGI TRANSISTOR		
Q007	2SA1530A/QR/-X	SI TRANSISTOR		
Q008	2SA1530A/QR/-X	SI TRANSISTOR		
Q009	2SC2712/YG/-X	TRANSISTOR		
Q010	2SC2712/YG/-X	TRANSISTOR		
Q011	2SC2712/YG/-X	TRANSISTOR		
Q012	2SC2712/YG/-X	TRANSISTOR		
Q013	2SK1830-X	MOS FET		
Q014	2SK1830-X	MOS FET		
Q015	2SK1830-X	MOS FET		
Q016	DTC124EKA-X	DIGI TRANSISTOR		
Q017	DTC124EKA-X	DIGI TRANSISTOR		
Q018	2SA1022/BC/-X	TRANSISTOR		
Q019	2SA1022/BC/-X	TRANSISTOR		
Q020	2SA1022/BC/-X	TRANSISTOR		
Q331	2SA1037AK/QR/-X	TRANSISTOR		
Q332	2SC2412K/QR/-X	TRANSISTOR		
Q333	2SA1037AK/QR/-X	TRANSISTOR		
Q351	2SA1037AK/QR/-X	TRANSISTOR		
Q352	2SC2412K/QR/-X	TRANSISTOR		
Q353	2SA1037AK/QR/-X	TRANSISTOR		
Q354	2SA1037AK/QR/-X	TRANSISTOR		
Q701	2SA1037AK/QR/-X	TRANSISTOR		
Q702	2SA1037AK/QR/-X	TRANSISTOR		
Q703	2SA1037AK/QR/-X	TRANSISTOR		
Q704	2SC2412K/QR/-X	TRANSISTOR		
Q705	2SA1037AK/QR/-X	TRANSISTOR		
Q707	2SA1037AK/QR/-X	TRANSISTOR		
Q711	2SC2412K/QR/-X	TRANSISTOR		
Q712	2SC2412K/QR/-X	TRANSISTOR		
Q713	2SC2412K/QR/-X	TRANSISTOR		
Q714	2SC2412K/QR/-X	TRANSISTOR		
Q715	2SC2412K/QR/-X	TRANSISTOR		
Q716	2SC2412K/QR/-X	TRANSISTOR		
Q753	2SC2412K/QR/-X	TRANSISTOR		
Q754	2SC2412K/QR/-X	TRANSISTOR		
Q755	2SC2412K/QR/-X	TRANSISTOR		
Q756	2SA1037AK/QR/-X	TRANSISTOR		

△Ref No.	Part No.	Part Name	Description	Local	△Ref No.	Part No.	Part Name	Description	Local
Q758	2SC2412K/QR/-X	TRANSISTOR			C048	NEH71CM-476X	E CAPACITOR	47uF 16V M	
Q759	2SC2412K/QR/-X	TRANSISTOR			C049	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q760	2SA1037AK/QR/-X	TRANSISTOR			C050	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q762	2SC2412K/QR/-X	TRANSISTOR			C051	NEH71CM-476X	E CAPACITOR	47uF 16V M	
Q763	2SC2412K/QR/-X	TRANSISTOR			C052	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q764	IMX1-XW	PAIR TRANSISTOR			C053	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q791	2SC2412K/QR/-X	TRANSISTOR			C054	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q792	2SC2412K/QR/-X	TRANSISTOR			C055	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q793	DTC124EKA-X	DIGI TRANSISTOR			C056	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q1101	2SC2412K/QR/-X	TRANSISTOR			C057	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q1102	2SC2412K/QR/-X	TRANSISTOR			C059	NCB11AK-106X	C CAPACITOR	10uF 10V K	
Q1103	2SA1037AK/QR/-X	TRANSISTOR			C060	NCB11AK-106X	C CAPACITOR	10uF 10V K	
Q1104	2SC2412K/QR/-X	TRANSISTOR			C061	NEH71CM-106X	E CAPACITOR	10uF 16V M	
Q1105	2SA1037AK/QR/-X	TRANSISTOR			C062	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
Q1106	2SC2412K/QR/-X	TRANSISTOR			C067	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q1107	DTC124EKA-X	DIGI TRANSISTOR			C074	NEH70JM-107X	E CAPACITOR	100uF 6.3V M	
Q1201	2SC2412K/QR/-X	TRANSISTOR			C076	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q1202	2SC2412K/QR/-X	TRANSISTOR			C078	NEH70JM-107X	E CAPACITOR	100uF 6.3V M	
Q1203	2SA1037AK/QR/-X	TRANSISTOR			C079	NEH71CM-476X	E CAPACITOR	47uF 16V M	
Q1205	2SC2412K/QR/-X	TRANSISTOR			C302	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
Q1206	2SC2412K/QR/-X	TRANSISTOR			C304	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q1207	2SA1037AK/QR/-X	TRANSISTOR			C305	NDC31HJ-561X	C CAPACITOR	560pF 50V J	
Q1209	2SC2412K/QR/-X	TRANSISTOR			C307	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
Q1210	2SC2412K/QR/-X	TRANSISTOR			C308	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q1211	2SA1037AK/QR/-X	TRANSISTOR			C309	NDC31HJ-470X	C CAPACITOR	47pF 50V J	
Q1215	DTC124EKA-X	DIGI TRANSISTOR			C310	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q4001	2SC3837K/NP/-X	TRANSISTOR			C313	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q4002	2SA1022/BC/-X	TRANSISTOR			C314	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q4003	IMX1-XW	PAIR TRANSISTOR			C315	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q4005	2SC3837K/NP/-X	TRANSISTOR			C316	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q4006	2SA1022/BC/-X	TRANSISTOR			C317	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q4007	IMX1-XW	PAIR TRANSISTOR			C318	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q4008	2SC3837K/NP/-X	TRANSISTOR			C319	NEH91CM-476X	E CAPACITOR	47uF 16V M	
Q4009	2SA1022/BC/-X	TRANSISTOR			C321	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q4010	IMX1-XW	PAIR TRANSISTOR			C322	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q7301	2SA1022/BC/-X	TRANSISTOR			C323	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q7302	2SA1022/BC/-X	TRANSISTOR			C324	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q7303	2SA1022/BC/-X	TRANSISTOR			C325	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q7601	2SC3928A/QR/-X	TRANSISTOR			C326	NDC31HJ-100X	C CAPACITOR	10pF 50V J	
Q7801	2SC3928A/QR/-X	TRANSISTOR			C331	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
Q7803	2SC3928A/QR/-X	TRANSISTOR			C332	NDC31HJ-101X	C CAPACITOR	100pF 50V J	
					C333	NDC31HJ-150X	C CAPACITOR	15pF 50V J	
D001	MA111-X	SI DIODE			C334	NDC31HJ-121X	C CAPACITOR	120pF 50V J	
D002	MA111-X	SI DIODE			C335	NDC31HJ-330X	C CAPACITOR	33pF 50V J	
D003	MA3068/M/-X	Z DIODE			C336	NCF11CZ-475X	C CAPACITOR	4.7uF 16V Z	
D005	RSA6.1J4-W	SI DIODE			C351	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
D006	RSA6.1J4-W	SI DIODE			C352	NDC31HJ-221X	C CAPACITOR	220pF 50V J	
D1901	D1FS4-X	SB DIODE			C354	NDC31HJ-221X	C CAPACITOR	220pF 50V J	
D1902	PTZ11B-X	Z DIODE			C356	NCF11CZ-475X	C CAPACITOR	4.7uF 16V Z	
D1904	PTZ6.8B-X	Z DIODE			C401	NEH90JM-107X	E CAPACITOR	100uF 6.3V M	
D7803	MA111-X	SI DIODE			C403	NEH90JM-107X	E CAPACITOR	100uF 6.3V M	
D7804	MA3056/M/-X	Z DIODE			C404	NEH90JM-107X	E CAPACITOR	100uF 6.3V M	
					C405	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C001	NEH70GM-227X	E CAPACITOR	220uF 4V M		C406	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C002	NEH90JM-107X	E CAPACITOR	100uF 6.3V M		C407	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C003	NCB20JK-225X	C CAPACITOR	2.2uF 6.3V K		C408	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C004	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C409	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C005	NCB20JK-225X	C CAPACITOR	2.2uF 6.3V K		C410	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C006	NCB20JK-225X	C CAPACITOR	2.2uF 6.3V K		C411	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C007	NEH70GM-227X	E CAPACITOR	220uF 4V M		C412	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C011	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C413	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C012	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C414	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C019	NEH71CM-476X	E CAPACITOR	47uF 16V M		C415	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C020	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C416	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C021	NEH71CM-476X	E CAPACITOR	47uF 16V M		C417	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C022	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C418	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C023	NCB31EK-333X	C CAPACITOR	0.033uF 25V K		C419	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C024	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C420	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C027	NEH71CM-476X	E CAPACITOR	47uF 16V M		C421	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C028	NEH71CM-476X	E CAPACITOR	47uF 16V M		C422	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C029	NDC31HJ-151X	C CAPACITOR	150pF 50V J		C423	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C030	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C462	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C031	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C463	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C032	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C466	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C034	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C469	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C035	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C701	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C036	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C702	NCF31CZ-224X	C CAPACITOR	0.22uF 16V Z	
C037	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C703	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C038	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C704	NEH71CM-476X	E CAPACITOR	47uF 16V M	
C039	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C705	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C040	NDC31HJ-330X	C CAPACITOR	33pF 50V J		C706	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C041	NDC31HJ-330X	C CAPACITOR	33pF 50V J		C707	NEH71CM-476X	E CAPACITOR	47uF 16V M	
C042	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C708	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C043	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C709	NCF11CZ-475X	C CAPACITOR	4.7uF 16V Z	
C045	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C710	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C046	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C711	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C047	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C712	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	

△Ref No.	Part No.	Part Name	Description	Local	△Ref No.	Part No.	Part Name	Description	Local
C713	NEH71CM-476X	E CAPACITOR	47uF 16V M		C1106	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C714	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1107	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C715	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1108	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C716	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1110	NBE71CM-476X	TA E CAPACITOR	47uF 16V M	
C717	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1111	NCB11CK-225X	C CAPACITOR	2.2uF 16V K	
C718	NEH71CM-106X	E CAPACITOR	10uF 16V M		C1201	NEH71CM-106X	E CAPACITOR	10uF 16V M	
C719	NDC31HJ-6R0X	C CAPACITOR	6pF 50V J		C1202	NDC31HJ-120X	C CAPACITOR	12pF 50V J	
C720	NCB31AK-474X	C CAPACITOR	0.47uF 10V K		C1203	NDC31HJ-220X	C CAPACITOR	22pF 50V J	
C721	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1204	NDC31HJ-820X	C CAPACITOR	82pF 50V J	
C722	NCB11CK-225X	C CAPACITOR	2.2uF 16V K		C1206	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C723	NCB31HK-223X	C CAPACITOR	0.022uF 50V K		C1207	NEH71CM-106X	E CAPACITOR	10uF 16V M	
C724	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1208	NDC31HJ-121X	C CAPACITOR	120pF 50V J	
C726	NDC31HJ-271X	C CAPACITOR	270pF 50V J		C1209	NDC31HJ-121X	C CAPACITOR	120pF 50V J	
C728	NEH70JM-107X	E CAPACITOR	100uF 6.3V M		C1210	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C730	NEH70JM-107X	E CAPACITOR	100uF 6.3V M		C1211	NEH71CM-106X	E CAPACITOR	10uF 16V M	
C731	NEH71EM-226X	E CAPACITOR	22uF 25V M		C1212	NDC31HJ-121X	C CAPACITOR	120pF 50V J	
C732	NCF31CZ-334X	C CAPACITOR	0.33uF 16V Z		C1213	NDC31HJ-121X	C CAPACITOR	120pF 50V J	
C734	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1214	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C741	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1221	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
C742	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1222	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
C743	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1223	NCB31AK-474X	C CAPACITOR	0.47uF 10V K	
C744	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1224	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C745	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1225	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C746	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1226	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C750	NDC31HJ-180X	C CAPACITOR	18pF 50V J		C1227	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C751	NDC31HJ-181X	C CAPACITOR	180pF 50V J		C1228	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C752	NDC31HJ-820X	C CAPACITOR	82pF 50V J		C1229	NEH91CM-476X	E CAPACITOR	47uF 16V M	
C753	NEH91CM-476X	E CAPACITOR	47uF 16V M		C1230	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C754	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1231	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C755	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1232	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C756	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1233	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C757	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1234	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C758	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1235	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C759	NCB31AK-474X	C CAPACITOR	0.47uF 10V K		C1236	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C760	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1237	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C761	NDC31HJ-681X	C CAPACITOR	680pF 50V J		C1238	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C762	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1239	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C763	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1240	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C764	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1241	NEH91CM-476X	E CAPACITOR	47uF 16V M	
C765	NDC31HJ-560X	C CAPACITOR	56pF 50V J		C1242	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C766	NDC31HJ-560X	C CAPACITOR	56pF 50V J		C1243	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C767	NEH91CM-476X	E CAPACITOR	47uF 16V M		C1244	NEH91CM-476X	E CAPACITOR	47uF 16V M	
C768	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1245	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C769	NDC31HJ-560X	C CAPACITOR	56pF 50V J		C1246	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C770	NDC31HJ-560X	C CAPACITOR	56pF 50V J		C1247	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C771	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1248	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C772	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1249	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C773	NDC31HJ-330X	C CAPACITOR	33pF 50V J		C1250	NEH91CM-476X	E CAPACITOR	47uF 16V M	
C774	NDC31HJ-150X	C CAPACITOR	15pF 50V J		C1251	NEH70JM-107X	E CAPACITOR	100uF 6.3V M	
C775	NDC31HJ-100X	C CAPACITOR	10pF 50V J		C1252	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C776	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1253	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C777	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1261	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C778	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1301	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C779	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1302	NCB11AK-106X	C CAPACITOR	10uF 10V K	
C780	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1303	NCB21HK-472X	C CAPACITOR	4700pF 50V K	
C781	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1304	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C782	NEH70JM-107X	E CAPACITOR	100uF 6.3V M		C1321	NEH91CM-476X	E CAPACITOR	47uF 16V M	
C783	NEH70JM-107X	E CAPACITOR	100uF 6.3V M		C1322	NCB31HK-103X	C CAPACITOR	0.01uF 50V K	
C784	NEH70JM-107X	E CAPACITOR	100uF 6.3V M		C1341	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C785	NEH70JM-107X	E CAPACITOR	100uF 6.3V M		C1342	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C786	NCF11CZ-475X	C CAPACITOR	4.7uF 16V Z		C1901	NEH90JM-107X	E CAPACITOR	100uF 6.3V M	
C787	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1902	NEH90JM-107X	E CAPACITOR	100uF 6.3V M	
C788	NEH70JM-107X	E CAPACITOR	100uF 6.3V M		C1906	NEX51CM-335X	E CAPACITOR	3.3uF 16V M	
C789	NEH71CM-476X	E CAPACITOR	47uF 16V M		C1911	NCB11CK-225X	C CAPACITOR	2.2uF 16V K	
C790	NCF11CZ-475X	C CAPACITOR	4.7uF 16V Z		C1912	NCB11CK-225X	C CAPACITOR	2.2uF 16V K	
C791	NCF11CZ-475X	C CAPACITOR	4.7uF 16V Z		C1913	NEH90JM-107X	E CAPACITOR	100uF 6.3V M	
C792	NEH91CM-476X	E CAPACITOR	47uF 16V M		C1914	NEX50JM-156X	E CAPACITOR	15uF 6.3V M	
C793	NCB31HK-103X	C CAPACITOR	0.01uF 50V K		C1917	NEH91CM-476X	E CAPACITOR	47uF 16V M	
C794	NDC31HJ-180X	C CAPACITOR	18pF 50V J		C1918	NEH90JM-107X	E CAPACITOR	100uF 6.3V M	
C795	NDC31HJ-100X	C CAPACITOR	10pF 50V J		C1919	NEX50JM-156X	E CAPACITOR	15uF 6.3V M	
C796	NDC31HJ-180X	C CAPACITOR	18pF 50V J		C1922	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C797	NDC31HJ-100X	C CAPACITOR	10pF 50V J		C1923	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C1001	NBE71CM-476X	TA E CAPACITOR	47uF 16V M		C1924	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C1002	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C1925	NCB31HK-102X	C CAPACITOR	1000pF 50V K	
C1003	NCB21CK-334X	C CAPACITOR	0.33uF 16V K		C4002	NDC31HJ-390X	C CAPACITOR	39pF 50V J	
C1004	NCB21AK-105X	C CAPACITOR	1uF 10V K		C4005	NDC31HJ-470X	C CAPACITOR	47pF 50V J	
C1005	NBE71CM-476X	TA E CAPACITOR	47uF 16V M		C4006	NDC31HJ-3R0X	C CAPACITOR	3pF 50V J	
C1006	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C4008	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C1007	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C4009	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C1008	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		C4012	NDC31HJ-390X	C CAPACITOR	39pF 50V J	
C1009	NEH90JM-107X	E CAPACITOR	100uF 6.3V M		C4014	NDC31HJ-3R0X	C CAPACITOR	3pF 50V J	
C1010	NCB11CK-225X	C CAPACITOR	2.2uF 16V K		C4015	NDC31HJ-470X	C CAPACITOR	47pF 50V J	
C1101	NEH91EM-336X	E CAPACITOR	33uF 25V M		C4016	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C1102	NDC31HJ-221X	C CAPACITOR	220pF 50V J		C4017	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z	
C1103	NDC31HJ-150X	C CAPACITOR	15pF 50V J		C4019	NDC31HJ-390X	C CAPACITOR	39pF 50V J	
C1104	NDC31HJ-121X	C CAPACITOR	120pF 50V J		C4021	NDC31HJ-3R0X	C CAPACITOR	3pF 50V J	
C1105	NCF11CZ-475X	C CAPACITOR	4.7uF 16V Z		C4022	NDC31HJ-470X	C CAPACITOR	47pF 50V J	

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△Ref No.	Part No.	Part Name	Description	Local	△Ref No.	Part No.	Part Name	Description	Local
C7608	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R117	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C7609	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R121	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C7612	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R122	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C7613	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R123	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
C7614	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R124	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
C7615	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R125	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C7809	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R126	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
C7810	NEH90JM-107X	E CAPACITOR	100uF 6.3V M		R127	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C7815	NEH90JM-107X	E CAPACITOR	100uF 6.3V M		R128	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C7818	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R129	NRSA63J-823X	MG RESISTOR	82kΩ 1/16W J	
C7819	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R130	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J	
C7820	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R132	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C7821	NCB11AK-106X	C CAPACITOR	10uF 10V K		R133	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
C7825	NDC31HJ-220X	C CAPACITOR	22pF 50V J		R135	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
C7826	NDC31HJ-220X	C CAPACITOR	22pF 50V J		R136	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
C7828	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R137	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7829	NEH70JM-226X	E CAPACITOR	22uF 6.3V M		R138	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
C7832	NCF31CZ-104X	C CAPACITOR	0.1uF 16V Z		R139	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
					R142	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R001	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R147	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R002	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		R148	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R003	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R149	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R004	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R151	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R005	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R152	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R006	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R153	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R007	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R154	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R008	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R158	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R009	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R169	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R010	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R170	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R011	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R171	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R012	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R173	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R013	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R174	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R014	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R180	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R015	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R181	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R016	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R182	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R017	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R195	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R018	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R196	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R019	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R197	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R020	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R198	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R022	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R199	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R024	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R302	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R027	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R303	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R030	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R304	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R032	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R306	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R034	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R307	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R035	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R308	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R036	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R310	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R042	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R313	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R043	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R314	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R044	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R315	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R046	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R319	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R048	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R331	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R050	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R332	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R055	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R333	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R056	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R334	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R057	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R335	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R058	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R337	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R059	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R338	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R060	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R339	NRSA63D-102X	MG RESISTOR	1kΩ 1/16W D	
R061	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R340	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R087	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R342	NRVA63D-271X	CMF RESISTOR	270Ω 1/16W D	
R089	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R343	NRSA63J-680X	MG RESISTOR	68Ω 1/16W J	
R090	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R351	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R091	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R352	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R092	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R353	NRSA63J-182X	MG RESISTOR	1.8kΩ 1/16W J	
R093	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R354	NRSA63J-121X	MG RESISTOR	120Ω 1/16W J	
R094	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R357	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R095	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J		R358	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R096	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R359	NRSA63D-102X	MG RESISTOR	1kΩ 1/16W D	
R097	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R362	NRSA63D-221X	MG RESISTOR	220Ω 1/16W D	
R098	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R363	NRSA63J-680X	MG RESISTOR	68Ω 1/16W J	
R099	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R364	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R100	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R401	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R101	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R403	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R102	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R404	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R103	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J		R405	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R104	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J		R406	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R105	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R407	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R106	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R408	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R107	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R409	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R108	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R411	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R109	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R412	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R110	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R413	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R111	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R414	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R112	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R415	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R113	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R416	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R114	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R418	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	



△Ref No.	Part No.	Part Name	Description	Local	△Ref No.	Part No.	Part Name	Description	Local
R419	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R768	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R420	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R769	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R421	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R770	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R422	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R771	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R425	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R773	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R426	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R774	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J	
R430	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R775	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R431	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R776	NRSA63J-153X	MG RESISTOR	15kΩ 1/16W J	
R432	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R777	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R433	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R778	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R437	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R779	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R438	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R780	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R439	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R781	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R440	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R783	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R441	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R784	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R442	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R785	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R481	NRZ0040-101X	NET RESISTOR	100Ω 1/16W J x4		R786	NRSA63J-562X	MG RESISTOR	5.6kΩ 1/16W J	
R482	NRZ0040-101X	NET RESISTOR	100Ω 1/16W J x4		R787	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R483	NRZ0040-101X	NET RESISTOR	100Ω 1/16W J x4		R788	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R484	NRZ0040-101X	NET RESISTOR	100Ω 1/16W J x4		R789	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R485	NRZ0040-101X	NET RESISTOR	100Ω 1/16W J x4		R790	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R486	NRZ0040-101X	NET RESISTOR	100Ω 1/16W J x4		R791	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R701	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R792	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R702	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R793	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R703	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R798	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R704	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R799	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J	
R705	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R1003	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R706	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J		R1101	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R707	NRSA63J-752X	MG RESISTOR	7.5kΩ 1/16W J		R1102	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J	
R708	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R1103	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R709	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R1104	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R710	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1105	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J	
R711	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1106	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J	
R712	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R1107	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R713	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R1108	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R714	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1109	NRSA63D-102X	MG RESISTOR	1kΩ 1/16W D	
R715	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1110	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R716	NRSA63J-273X	MG RESISTOR	27kΩ 1/16W J		R1112	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J	
R717	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		R1113	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R718	NRSA63J-392X	MG RESISTOR	3.9kΩ 1/16W J		R1114	NRSA63J-224X	MG RESISTOR	220kΩ 1/16W J	
R719	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R1115	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R720	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R1116	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R721	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R1117	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R722	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R1118	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R723	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1119	NRSA63J-472X	MG RESISTOR	4.7kΩ 1/16W J	
R724	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R1122	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R725	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R1124	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R726	NRSA63J-681X	MG RESISTOR	680Ω 1/16W J		R1201	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
R727	NRSA63J-271X	MG RESISTOR	270Ω 1/16W J		R1202	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R728	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R1203	NRSA63J-560X	MG RESISTOR	56Ω 1/16W J	
R729	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1204	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R730	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1205	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R731	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1206	NRSA63J-122X	MG RESISTOR	1.2kΩ 1/16W J	
R732	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1209	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R733	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R1210	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J	
R734	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R1211	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R735	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1215	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
R736	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1216	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R737	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R1217	NRSA63J-560X	MG RESISTOR	56Ω 1/16W J	
R738	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R1218	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R739	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1219	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R740	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1220	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	
R741	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R1221	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R742	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R1222	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R743	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1223	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R744	NRSA63J-154X	MG RESISTOR	150kΩ 1/16W J		R1224	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R745	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R1228	NRSA63J-393X	MG RESISTOR	39kΩ 1/16W J	
R746	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J		R1229	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J	
R747	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1230	NRSA63J-560X	MG RESISTOR	56Ω 1/16W J	
R748	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1231	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R751	NRSA63J-181X	MG RESISTOR	180Ω 1/16W J		R1232	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R752	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		R1233	NRSA63J-272X	MG RESISTOR	2.7kΩ 1/16W J	
R753	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J		R1234	NRSA63J-561X	MG RESISTOR	560Ω 1/16W J	
R754	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		R1235	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R755	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R1236	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J	
R756	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J		R1237	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J	
R757	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1251	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R758	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		R1252	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R759	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J		R1253	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R760	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R1254	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R761	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		R1255	NRSA63J-222X	MG RESISTOR	2.2kΩ 1/16W J	
R762	NRSA63J-331X	MG RESISTOR	330Ω 1/16W J		R1256	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R763	NRSA63J-821X	MG RESISTOR	820Ω 1/16W J		R1257	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R764	NRSA63J-391X	MG RESISTOR	390Ω 1/16W J		R1258	NRSA63J-155X	MG RESISTOR	1.5MΩ 1/16W J	
R765	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R1260	NRSA63J-470X	MG RESISTOR	47Ω 1/16W J	
R766	NRSA63J-223X	MG RESISTOR	22kΩ 1/16W J		R1261	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	
R767	NRSA63J-682X	MG RESISTOR	6.8kΩ 1/16W J		R1262	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J	

(No.YA015) 3-19

3-20 (No.YA015)

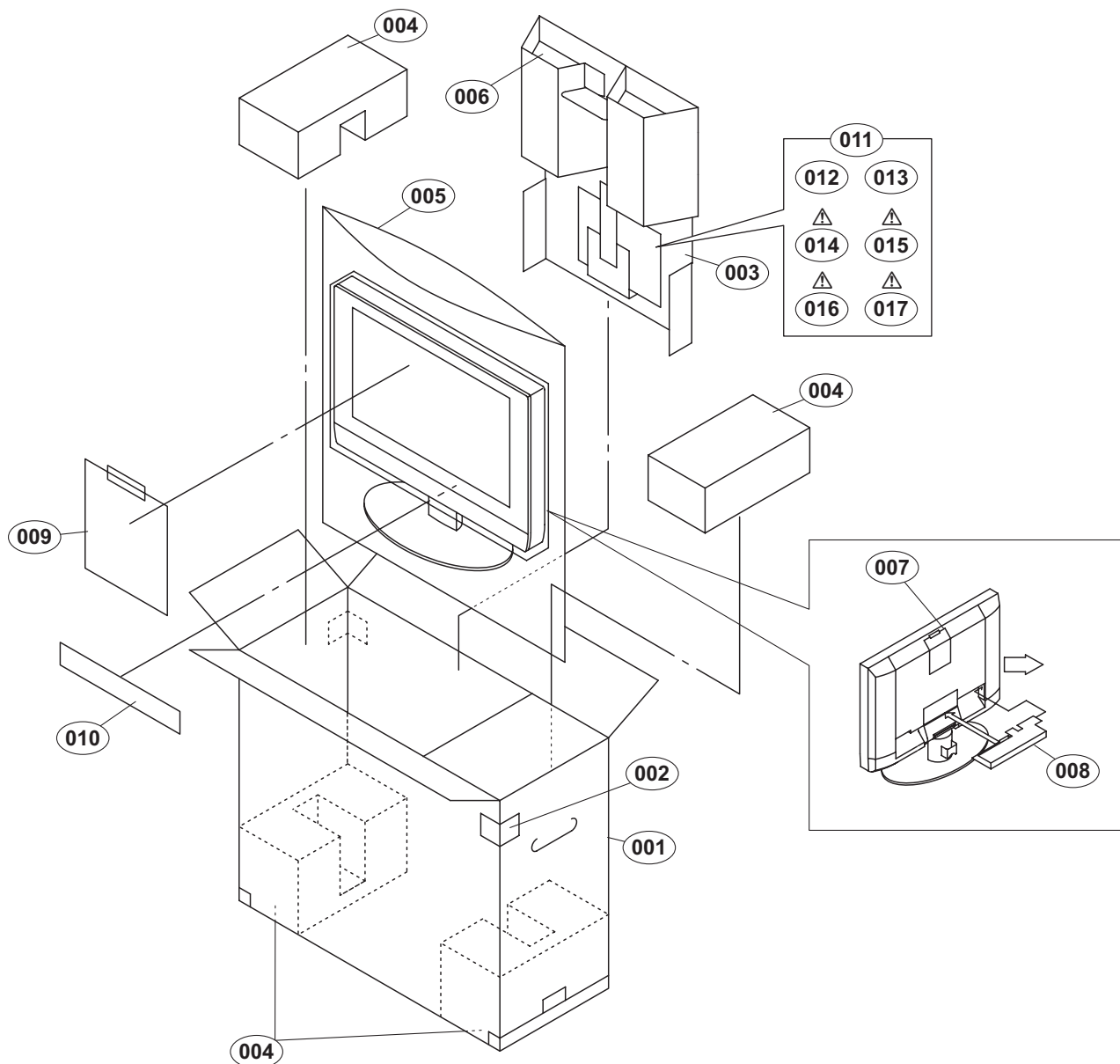
△Ref No.	Part No.	Part Name	Description	Local	△Ref No.	Part No.	Part Name	Description	Local
R7892	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		L4027	NQR0415-005X	EMI FILTER	0.1uF 25V M	
R7893	NRSA63J-101X	MG RESISTOR	100Ω 1/16W J		L4028	NQR0415-005X	EMI FILTER	0.1uF 25V M	
R7894	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		L4101	NQR0413-003X	FERRITE BEADS		
R7895	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		L4102	NQR0413-003X	FERRITE BEADS		
R7896	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		L4104	NQR0413-003X	FERRITE BEADS		
R7897	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		L4107	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
R7898	NRSA63J-221X	MG RESISTOR	220Ω 1/16W J		L4201	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
R7902	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		L4203	NQR0413-003X	FERRITE BEADS		
R7904	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		L4207	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
R7908	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		L7301	NQR0351-003X	FERRITE BEADS		
R7927	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		L7302	NQR0351-003X	FERRITE BEADS		
R7929	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		L7303	NQL092K-R10X	P COIL	0.1uH K	
R7931	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		L7304	NQL092K-R10X	P COIL	0.1uH K	
R7933	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J		L7305	NQL092K-R10X	P COIL	0.1uH K	
R7934	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		L7306	NQL092K-2R2X	P COIL	2.2uH K	
R7940	NRSA63J-104X	MG RESISTOR	100kΩ 1/16W J		L7307	NQL092K-2R2X	P COIL	2.2uH K	
R7941	NRSA63J-333X	MG RESISTOR	33kΩ 1/16W J		L7308	NQL092K-2R2X	P COIL	2.2uH K	
R7943	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		L7601	NQR0351-001X	FERRITE BEADS		
R7944	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J		L7602	NQR0504-001X	EMI FILTER		
R7945	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J		L7603	NQR0504-001X	EMI FILTER		
R7946	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J		L7604	NQR0504-001X	EMI FILTER		
R7947	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J		L7605	NQR0351-001X	FERRITE BEADS		
R7948	NRSA63J-563X	MG RESISTOR	56kΩ 1/16W J		L7802	NQR0351-001X	FERRITE BEADS		
RA7301	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN00H	QGF0508C1-30W	CONNECTOR	FFC/FPC (1-30)	
RA7302	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN00J	QGA1501C2-06V	CONNECTOR	W-B (1-6)	
RA7303	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN0AH	QGF0508C1-30W	CONNECTOR	FFC/FPC (1-30)	
RA7304	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN000A	QGA2001C2-13V	CONNECTOR	W-B (1-13)	
RA7305	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN000B	QGA1501C2-13V	CONNECTOR	W-B (1-13)	
RA7306	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN000K	QGA1501C2-07V	CONNECTOR	W-B (1-7)	
RA7601	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN000T	QGA1501C2-10V	CONNECTOR	W-B (1-10)	
RA7602	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN000W	QGA1501C2-04V	CONNECTOR	W-B (1-4)	
RA7603	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN000X	QGA1211C2-31X	CONNECTOR	W-B (1-31)	
RA7604	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN00AM	QGA1501C2-11V	CONNECTOR	W-B (1-11)	
RA7605	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN00C1	QGA2001F2-05V	CONNECTOR	W-B (1-5)	
RA7606	NRZ0040-0R0X	NET RESISTOR	0Ω 1/16W J x4		CN00C3	QGA2001F2-05V	CONNECTOR	W-B (1-5)	
L001	NQL092K-4R7X	P COIL	4.7uH K		CN00C4	QGA1501F2-08V	CONNECTOR	W-B (1-8)	
L003	NQL092K-4R7X	P COIL	4.7uH K		K001	NRSA63J-390X	MG RESISTOR	39Ω 1/16W J	
L005	NQL092K-4R7X	P COIL	4.7uH K		K002	NQR0389-003X	FERRITE BEADS		
L006	NQL092K-4R7X	P COIL	4.7uH K		K003	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
L007	NQL092K-4R7X	P COIL	4.7uH K		K004	NQR0389-003X	FERRITE BEADS		
L008	NQL092K-4R7X	P COIL	4.7uH K		K1203	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
L009	NQL034K-4R7X	COIL	4.7uH K		K1204	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
L010	NQL092K-4R7X	P COIL	4.7uH K		K1206	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
L011	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J		K4301	NQR0413-003X	FERRITE BEADS		
L012	NQL092K-4R7X	P COIL	4.7uH K		K4302	NQR0413-003X	FERRITE BEADS		
L013	NQL092K-4R7X	P COIL	4.7uH K		K7302	NQL79GM-220X	COIL	22uH M	
L014	NQL092K-4R7X	P COIL	4.7uH K		K7303	NQR0351-003X	FERRITE BEADS		
L015	NQL034K-4R7X	COIL	4.7uH K		K7801	NQR0351-001X	FERRITE BEADS		
L016	NQL034K-4R7X	COIL	4.7uH K		K7803	NQR0351-001X	FERRITE BEADS		
L022	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J		K7804	NQR0351-001X	FERRITE BEADS		
L302	NQL092K-3R3X	P COIL	3.3uH K		LC001	NQR0415-003X	EMI FILTER	0.47uF 16V M	
L331	NQL092K-6R8X	P COIL	6.8uH K		LC002	NQR0415-003X	EMI FILTER	0.47uF 16V M	
L351	NQL092K-100X	P COIL	10uH K		LC006	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L402	NQR0413-003X	FERRITE BEADS			LC007	NQR0479-001X	EMI FILTER		
L751	NQL092K-6R8X	P COIL	6.8uH K		LC008	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L752	NQL092K-6R8X	P COIL	6.8uH K		LC009	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L753	NQL092K-6R8X	P COIL	6.8uH K		LC010	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L754	NQL092M-270X	P COIL	27uH M		LC011	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L761	NQL034K-220X	P COIL	22uH K		LC012	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L762	NQL034K-101X	P COIL	100uH K		LC013	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L763	NQL034K-220X	P COIL	22uH K		LC015	NQR0479-001X	EMI FILTER		
L764	NQL034K-101X	P COIL	100uH K		LC016	NQR0479-001X	EMI FILTER		
L765	NQL034K-101X	P COIL	100uH K		LC017	NQR0479-001X	EMI FILTER		
L766	NQL034K-220X	P COIL	22uH K		LC018	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L767	NQL034K-220X	P COIL	22uH K		LC036	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L768	NQR0413-003X	FERRITE BEADS			LC037	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L769	NQL092M-180X	P COIL	18uH M		LC038	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L1001	NQR0413-003X	FERRITE BEADS			LC108	NQR0479-001X	EMI FILTER		
L1002	NQR0413-003X	FERRITE BEADS			LC109	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L1004	NQR0413-003X	FERRITE BEADS			LC301	NQR0450-004X	EMI FILTER	100pF 50V M	
L1005	NQR0413-003X	FERRITE BEADS			LC1051	NQR0450-008X	EMI FILTER	2200pF 50V M	
L1006	NQR0413-003X	FERRITE BEADS			LC1052	NQR0450-008X	EMI FILTER	2200pF 50V M	
L1101	NQL092K-6R8X	P COIL	6.8uH K		LC1053	NQR0450-008X	EMI FILTER	2200pF 50V M	
L1201	NQL092M-180X	P COIL	18uH M		LC1201	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L1202	NQL085J-101X	COIL	100uH J		LC1202	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L1203	NQL085J-101X	COIL	100uH J		LC1203	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L1205	NQR0413-003X	FERRITE BEADS			LC1204	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L1901	NQL52EM-220X	COIL	22uH M		LC1205	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L1902	NQL52EM-220X	COIL	22uH M		LC1206	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L1903	NQL52EM-220X	COIL	22uH M		LC1301	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L1905	NQL80CL-100X	COIL	10uH L		LC1305	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L4001	NQL092K-2R2X	P COIL	2.2uH K		LC1306	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L4002	NQL092K-2R2X	P COIL	2.2uH K		LC1307	NQR0415-005X	EMI FILTER	0.1uF 25V M	
L4003	NQL092K-2R2X	P COIL	2.2uH K		LC1308	NQR0479-001X	EMI FILTER		
L4025	NQR0415-005X	EMI FILTER	0.1uF 25V M		LC1309	NQR0479-001X	EMI FILTER		
L4026	NQR0415-005X	EMI FILTER	0.1uF 25V M		LC1310	NQR0479-001X	EMI FILTER		

△Ref No.	Part No.	Part Name	Description	Local
X001	NAX0644-001X	CRYSTAL	6.000000MHz	
X301	NAX0118-001X	CRYSTAL	20.000MHz	
X701	NAX0621-001X	CRYSTAL	16.200MHz	
X4101	NAX0636-001X	CXO	10.000MHz	
X4201	NAX0637-001X	CXO	74.1758MHz	
X7801	NAX0497-001X	C RESONATOR	10.000MHz	

## REMOTE CONTROL UNIT PARTS LIST (RM-C1808-1C)

△Ref No.	Part No.	Part Name	Description	Local
	2AA070311	BATTERY COVER		

# PACKING



## PACKING PARTS LIST

△ Ref.No.	Part No.	Part Name	Description	Local
001	AEM1002-088-E	PACKING CASE		
002	AEM1066-030-E	EURO LABEL	2pcs in 1set	LT-32C31BJE
002	AEM1066-029-E	EURO LABEL	2pcs in 1set	LT-32C31BUE
002	AEM1066-032-E	EURO LABEL	2pcs in 1set	LT-32C31SJE
002	AEM1066-031-E	EURO LABEL	2pcs in 1set	LT-32C31SUE
003	AEM3415-001A-U	CUSHION		
004	LC11697-002A-U	CUSHION ASSY	4pcs in 1set	
005	AEM1067-001A-E	FOAM BAG		
006	RM-C1808-1C	RC HAND PIECE		
007	LCT1504-001A-U	CAUTION SHEET		
008	AEM4166-001A-U	POWER CORD HOLD		
009	LCT1613-001A-U	CAUTION SHEET		
010	AEM4168-002A-U	CARTON SHEET		
011	AEM3021-002B-E	DOCUMENT BAGS		
012	BT-54013-7E	WARRANTY CARD		
013	-----	BATTERY	R6P/AA(x2)	
△ 014	LCT1590-001A-U	INST BOOK	English/German/French	LT-32C31BUE,LT-32C31SUE
△ 015	LCT1591-001A-U	INST BOOK	Portuguese/Dutch/Spanish/Italian	LT-32C31BUE,LT-32C31SUE
△ 016	LCT1592-001A-U	INST BOOK	Danish/Norwegian/Finn/Swedish	LT-32C31BUE,LT-32C31SUE
△ 017	LCT1593-001A-U	INST BOOK	Czech/Hungarian/Bulgarian/Polish/Romanian/Russian	LT-32C31BUE,LT-32C31SUE



# SERVICE MANUAL

## WIDE LCD PANEL TELEVISION

### LT-32C31BSE, LT-32C31SSE

BASIC CHASSIS

MK

The following items for the LT-32C31BSE and LT-32C31SSE were changed partly from LT-32C31BUE and LT-32C31SUE.

Therefore, this service manual describes only the items which differ from those of the LT-32C31BUE and LT-32C31SUE service manual.

For details other than those described in this manual, please refer to the LT-32C31BUE and LT-32C31SUE service manual (No.YA015, 2004/2).

## OUTLINE

Since the destination was changed, we have issued the SERVICE MANUAL for LT-32C31BSE and LT-32C31SSE.

## DIFFERENCE LIST

### EXPLODED VIEW PARTS LIST-2 (Page 3-3)

△	Ref. No.	PARTS No.		PARTS NAME	DESCRIPTION
		LT-32C31BUE LT-32C31SUE	LT-32C31BSE LT-32C31SSE		
△	102	LC21301-012A	LC21301-016A	RATING LABEL	

### PACKING (Page 3-23)

△	Ref. No.	PARTS No.		PARTS NAME	DESCRIPTION
		LT-32C31BUE LT-32C31SUE	LT-32C31BSE LT-32C31SSE		
△	002	AEM1066-031-E	AEM1066-046-E	EURO LABEL	2pcs in 1set
△	016	LCT1592-001A-U	---	INST BOOK	Delete
△	017	LCT1593-001A-U	---	INST BOOK	Delete
△	018	---	LCT1670-001A-U	INST SHEET	Addition



VICTOR COMPANY OF JAPAN, LIMITED

AV & MULTIMEDIA COMPANY VIDEO DISPLAY CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YA015B)



Printed in Japan  
WPC





# SERVICE MANUAL

WIDE LCD PANEL TELEVISION

**LT-32C31BJE,  
LT-32C31BUE,  
LT-32C31SJE,  
LT-32C31SUE,  
LT-32C31BSE,  
LT-32C31SSE**

BASIC CHASSIS
MK

## Supplementary


Here is some information related to the exchange of CONTROL PWB in the LCD PANEL UNIT.

For details other than those described in this manual, please refer to the LT-32C31BJE, LT-32C31BUE, LT-32C31SJE, LT-32C31SUE service manual (No.YA015, 2004/2) and LT-32C31BSE, LT-32C31SSE service manual (No.YA015B, 2004/4).

# HOW TO DIFFERENTIATE LCD PANEL UNIT

Two types of LCD PANEL UNITS are used in this model. Make sure to confirm the parts No. of LCD PANEL UNIT before exchanging CONTROL PWB. As PARTS No. is not described on the LCD PANEL UNIT, differentiate two types by checking the RATING LABEL(Revision) fixed on the back of the LCD PANEL UNIT.

Revision described part	
Revision	LCD PANEL UNIT PARTS NO.
C	QLD0304-001
D	QLD0304-002



**HITACHI**  
TX80D12VC0CAB  
2023H 00001

高電圧注意  
CAUTION HIGH VOLTAGE

MO 00 00 0 F 05 400001

USP 5576867 JP 2743293 USP 5598285  
JP 2701698

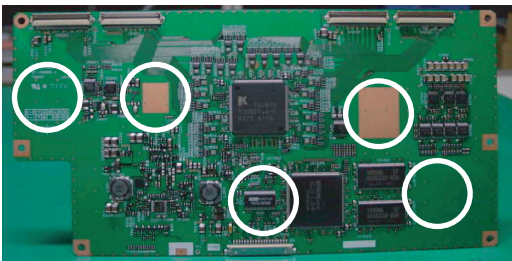
\* TX80D12VC0CAB 02023S 00001A \*

本ディスプレイユニット内の蛍光管には水銀が含まれております。液晶ディスプレイの廃棄に当たっては地方自治体の条例または規則に従って廃棄して下さい。  
COLD CATHODE FLUORESCENT LAMP IN COLOR LCD CONTAINS MERCURY.  
PLEASE FOLLOW LOCAL ORDINANCES OR REGULATIONS FOR ITS DISPOSAL.

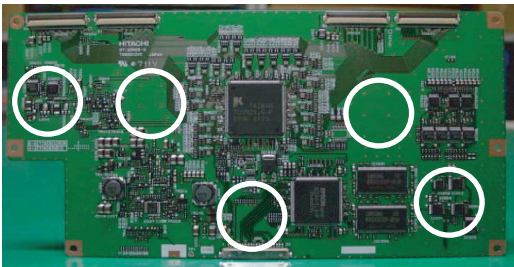
# HOW TO DIFFERENTIATE CONTROL PWB

CONTROL PWB which is to be exchanged differ according to the PARTS No. of the LCD PANEL UNIT.

Two types of CONTROL PWBS can be differentiate by checking the parts as shown as below.



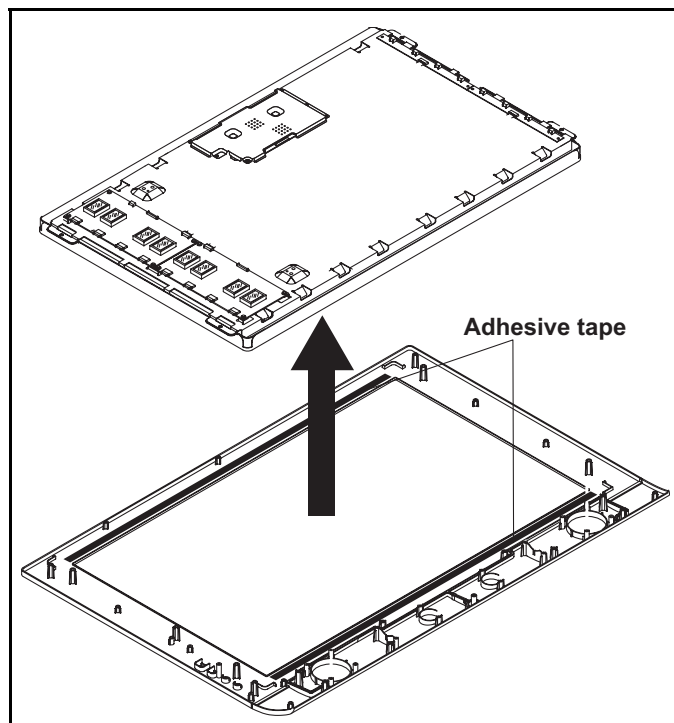
CONTORL PWB for QLD0304-001  
(QLD0304-001TCON)



CONTORL PWB for QLD0304-002  
(QLD0304-002TCON)

# REMOVING THE LCD PANEL UNIT

The LCD PANEL is fixed to the FRONT PANEL (at the back side) by using double-side adhesive tapes. To remove the LCD PANEL UNIT, remove the adhesive tape on the FRONT PANEL slowly.



# CHANGING THE CONTROL PWB

## CONFIRMATION PRIOR TO DISASSEMBLY

Before disassemble the LCD PANEL UNIT, confirm that there is no damage in the LCD PANEL UNIT (polarizer).

## 1. DISASSEMBLY OF LCD PANEL

For removing the LCD PANEL UNIT, see page 1-13 "3.1.10 REMOVING THE LCD PANEL UNIT" in LT-32C31BJE, LT-32C31BUE, LT-32C31SJE, LT-32C31SUE service manual.

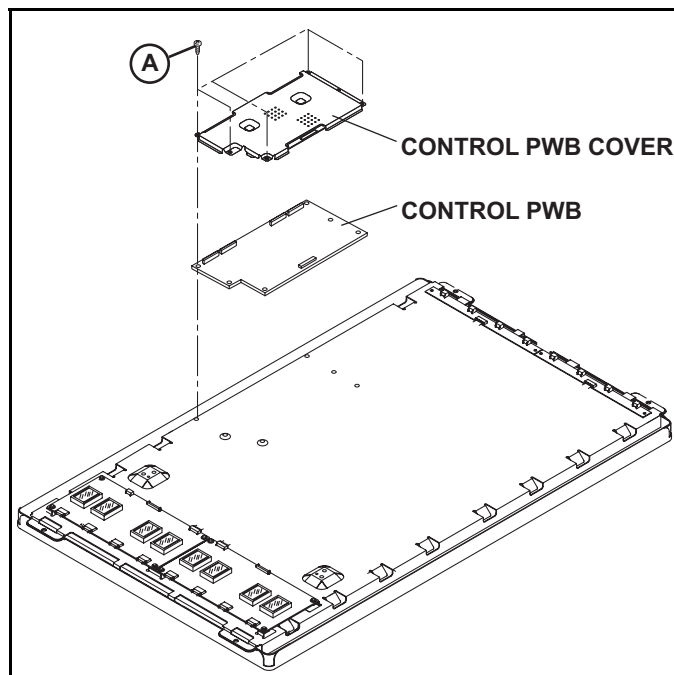
### 1.1 REMOVING THE CONTROL PWB

- Place the LCD PANEL with its backside facing upward. Be careful not to damage the surface of the screen.
- (1) Remove the 6 screws [A], and remove the CONTROL PWB COVER.
- (2) Remove the claws in the connectors, and pull out to remove the FLEXIBLE WIRE.

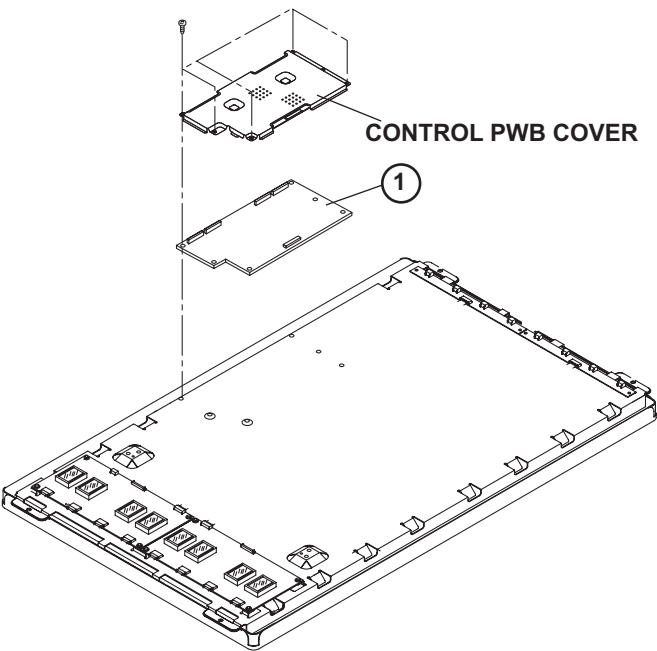
#### NOTE:

Be careful not to damage the FLEXIBLE WIRE.  
Especially during assembly procedure, be careful not to insert the FLEXIBLE WIRE in the LCD PANEL UNIT.

- (3) Remove the CONTROL PWB.



# EXPLODED VIEW



# EXPLODED VIEW PARTS LIST

CONTROL PWB which is to be exchanged differ according to the PARTS No. of the LCD PANEL UNIT. Be sure to confirm the PARTS No. of the LCD PANEL UNIT without fail.

⚠	Ref. No.	Part No.	Part name	Description
⚠	1	QLD0304-001TCON	CONTROL PWB	For QLD0304-001
⚠	1	QLD0304-002TCON	CONTROL PWB	For QLD0304-002

\* No parts other than a CONTROL PWB are supplied. Exchange the whole unit for other parts repair.



Victor Company of Japan, Limited  
AV & MULTIMEDIA COMPANY VIDEO DISPLAY CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

# JVC

ENGLISH  
DEUTSCH  
FRANÇAIS

LT-32C31BUE LT-26C31BUE  
LT-32C31SUE LT-26C31SUE  
LT-32C31BJE LT-26C31BJE  
LT-32C31SJE LT-26C31SJE

**WIDE LCD PANEL TV**

**INSTRUCTIONS**

16:9 LCD TV  
TELEVISEUR A ECRAN LCD PANORAMIQUE

BEDIENUNGSANLEITUNG  
MANUEL D'INSTRUCTIONS



**D.I.S.T.**  
Digital Image Scaling Technology

InteríArt

**T-V LINK**

*plain English  
approved*  
by the word centre

## ■ Warning

**DO NOT cut off the mains plug from this equipment.** If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adaptor or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If a new mains plug has to be fitted, then follow the instruction given below:

### Important

**Do not** make any connection to the larger terminal which is marked with the letter E or by the safety earth symbol  $\perp$  or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:

Blue: Neutral

Brown: Live

As these colours may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

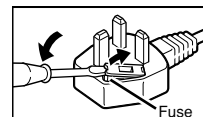
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

When replacing the fuse, use only a correctly rated approved type and always re-fit the fuse cover.

## ■ If in doubt — consult a competent electrician.

### How to replace the fuse

Open the fuse compartment with a blade screwdriver, and replace the fuse.



---

## ■ Guidelines for safe operation

This equipment has been designed and manufactured to comply with international safety standards. However, as with any electrical appliance, care must be taken to ensure optimal results and operational safety.

- Before attempting to use this equipment, read the operating instructions thoroughly.
- Ensure that all electrical connections (including the mains plug, extension leads, etc.) have been made in accordance with the manufacturer's instructions.
- If ever in doubt about the installation, operation or safety of this equipment, consult your dealer.
- Handle all glass panels or covers with care.
- Never operate this equipment if it appears damaged or operates abnormally. Turn the power off, disconnect the main power plug and consult your dealer.
- Never remove any affixed panels or covers. Doing so may result in electrical shock.
- Never leave this equipment operating unattended unless otherwise specifically stated that it is designed to do so or in standby mode. Only use the designated power switch to turn off the power and ensure that all potential users are instructed how to do so. Make special arrangements for infirm or handicapped persons.
- Never watch TV while operating a motor vehicle. It is illegal to watch TV while driving.
- Never listen to headphones at high volume. Doing so may damage your hearing.
- Never obstruct the ventilation of this equipment. Doing so may cause overheating and result in a malfunction or damage.
- Never use makeshift stands or attempt to affix legs with wood screws. When using a manufacturer's approved stand or legs, use only the fixtures provided and follow the installation instructions.
- Never allow this equipment to be exposed to rain or moisture.
- Never allow anyone, especially children, to insert anything into an opening in the case. Doing so may result in a fatal electrical shock.
- Never guess or take chances with electrical equipment of any kind. It is better to be safe than sorry.

Thank you for buying this JVC LCD flat television.

To make sure you understand how to use your new TV, please read this manual thoroughly before you begin.  
("LCD" stands for Liquid Crystal Display.)

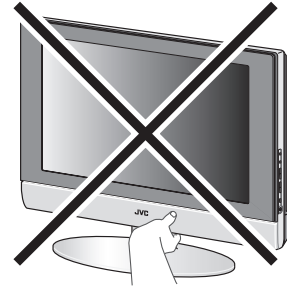
**WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

### WARNING

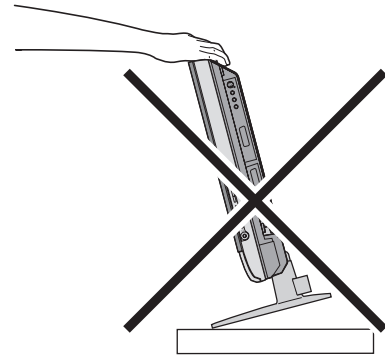
Always use the power cord which is supplied with the TV.

### WARNING

- Fingers may be trapped under the TV causing injuries. Hold the TV at the bottom in the middle, and do not allow it to tilt up or down.

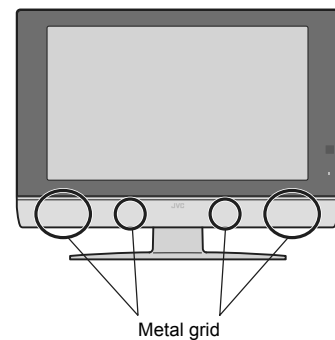


- The TV may fall causing injuries. Hold the bottom of the stand with your hand and tilt the TV up and down.
- Do not allow children to hang from the TV, place their elbows on the TV or lean against the TV. Doing so may cause the TV to fall over and lead to injuries.



### CAUTION

Do not press hard on the speaker area at the bottom front panel of the TV.  
Doing so can dent the metal grid.



### Pixel defects

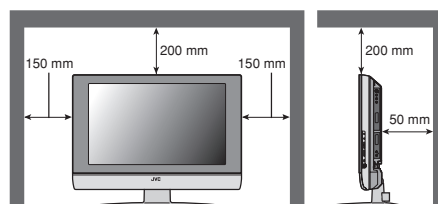
LCDs use collections of fine points (“pixels”) to display images. While there is no problem with more than 99.99% of these pixels, please understand that a very small number of pixels may not light, or may light all the time.

### Distance recommendations

Avoid improper installation and never position the unit where good ventilation is impossible.

When installing this TV, distance recommendations must be maintained between the set and the wall, as well as inside a tightly enclosed area or piece of furniture.

Keep to the minimum distance guidelines shown for safe operation.



### Failure to take the following precautions may cause damage to the television or remote control.

#### DO NOT block the TV's ventilation openings or holes.

(If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)

#### DO NOT place anything on top of the TV.

(such as cosmetics or medicines, flower vases, potted plants, cups, etc.)

#### DO NOT allow objects or liquid into the cabinet openings.

(If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)

#### DO NOT place any naked flame sources, such as lighted candles, on the TV.

#### DO NOT subject the TV to direct sunlight.

The surface of the TV screen is easily damaged. Be very careful with it when handling the TV.

Should the TV screen become soiled, wipe it with a soft dry cloth. Never rub it forcefully.

Never use any cleaner or detergent on it.

If there is a fault, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.

### ■ Cleaning the screen

The screen is coated with a special thin film to reduce reflection. If this film is damaged, uneven colors, discoloration, scratches, and other problems that cannot be repaired may occur. Pay attention to the following when handling the screen.

- Do not use glue or adhesive tape on the screen.
- Do not write on the screen.
- Do not allow the screen to come in contact with any hard objects.
- Do not allow condensation to form on the screen.
- Do not use alcohol, thinner, benzene or other solvents on the screen.
- Do not rub the screen hard.

### CAUTION:

- Operate only from the power source specified (AC 110 – 240 V, 50/60 Hz) on the unit.
- Avoid damaging the AC plug and power cord.
- When you are not using this unit for a long period of time, it is recommended that you disconnect the power cord from the main outlet.

### D.I.S.T. demonstration

To start the D.I.S.T. demonstration:

Press the **OK** button to display the MENU (main menu). Then press the yellow button.

A picture split in two (D.I.S.T. turned on and D.I.S.T. turned off) will appear on the screen.

To quit the D.I.S.T. demonstration:

Press the yellow button, **TV** button, **P**  $\vee/\wedge$  buttons or any of the number buttons.



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# Setting up your TV

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- When you install the TV on the wall, only use a JVC wall mounting unit (optional) which is designed for this TV.
  - Make sure that the TV is installed on the wall by a skilled installer.
- 

## Installation

---

### Cautions for installation

- Install the TV in a corner on a wall or on the floor so as to keep cords out of the way.
  - The TV will generate a slight amount of heat during operation. Ensure that sufficient space is available around the TV to allow satisfactory cooling. See “Distance recommendations” on page 2.
- 

A protective sheet is fitted to the TV panel frame.

---

## Using the stand

---

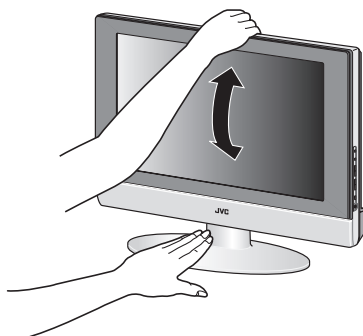
### This TV comes with a table top stand already attached.

This stand can be used to adjust the direction of the TV screen 5° up, 10° down, and 20° to the left or right.

#### ■ Tilt the TV up and down:

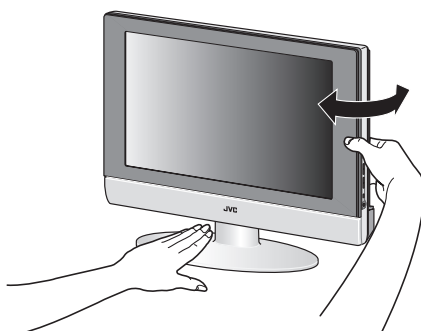
While holding the bottom of the stand with one hand, use your other hand to hold the middle of the top of the TV and slowly tilt the TV up and down.

- As a safety measure, the stand needs a certain amount of force to tilt the TV.



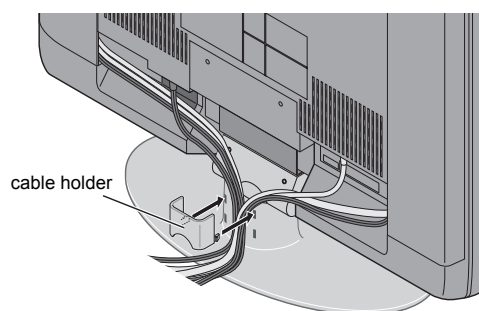
#### ■ Rotate the TV to the left and right:

While holding the bottom of the stand with one hand, use your other hand to hold the edge of the panel and slowly adjust the direction of the TV screen.



#### ■ Cable holder

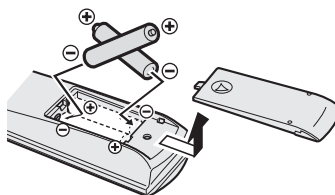
A cable holder which is used to keep the connection cables tidy is attached to the back of the stand. Gently squeeze the left and right of the cable holder and pull it to remove it from the stand. After putting the cables in the cable holder, attach it to the back of the stand again.



## Putting the batteries into the Remote control

Use two AA/R6 dry cell batteries.

Insert the batteries from the  $\ominus$  end, making sure the  $\oplus$  and  $\ominus$  polarities are correct.



- Follow the warnings printed on the batteries.
- Battery life is about six months to one year, depending on your frequency of use.
- The batteries we supply are only for setting up and testing your TV, please replace them as soon as you need to.
- If the remote control does not work properly, replace the batteries.

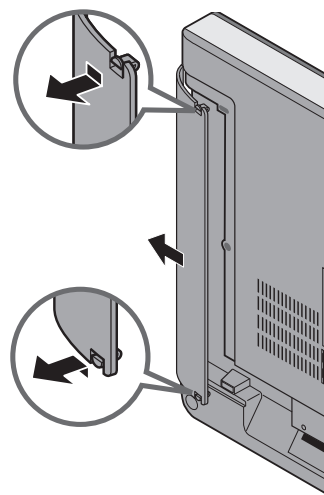
## Removing the terminal covers

There are connection terminals behind the covers on the left and right of the rear of the TV. Remove these two covers before connecting an antenna or VCR.

### For LT-32C31

Remove the covers by removing the hooks.

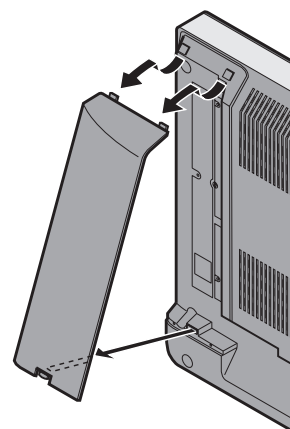
When replacing the covers, place the side of the covers against the TV and insert the hooks.



### For LT-26C31

The covers can be removed by removing the hook at the bottom and then pulling out while lifting slightly. To replace the covers, first connect the hook at the top of the cover to the TV and then insert the hook at the bottom.

- Leave these covers off when mounting the TV on a wall.



- Leave the covers off if they do not fit properly. Do not force to replace the covers. Doing so may cause damage to the connection cables and the covers.

## Connecting the aerial and video cassette recorder (VCR)

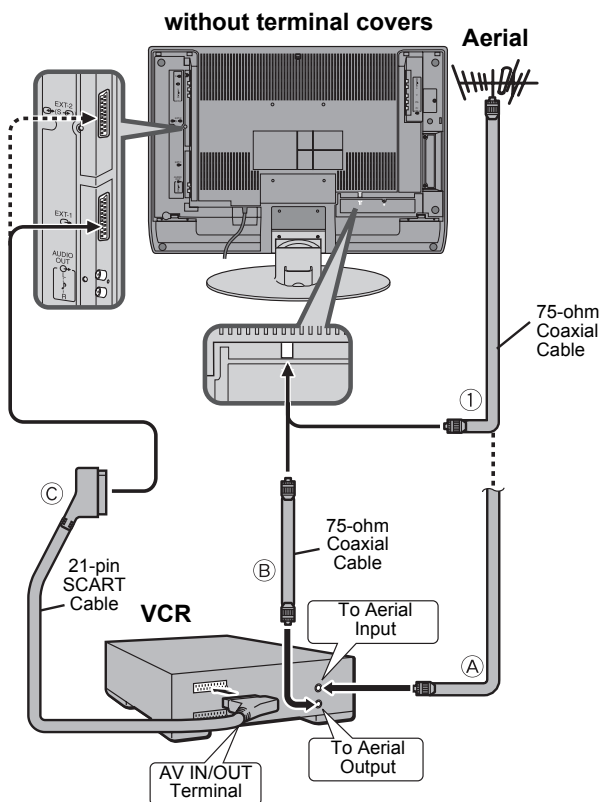
- The connecting cables are not provided.
- For further details, refer to the manuals provided with the devices to be connected.

■ If you are connecting a VCR, follow ① → ② → ③ in the diagram opposite.

■ If you are not connecting a VCR, follow ①.

To use the T-V LINK functions, you must have a T-V LINK compatible VCR connected by a SCART cable ③ to the EXT-2 terminal on the TV. For details about T-V LINK functions, see “T-V LINK functions” on page 8.

- You can watch a video using the VCR without doing ③. For details, see your VCR instruction manual.
  - To connect more equipment, please see “Connecting external equipment” on page 33.
  - To connect additional audio equipment, see “Connecting Speakers/Amplifier” on page 34.
  - If you connect a decoder to a T-V LINK compatible VCR, set the DECODER (EXT-2) function to ON. For details, see “Using the DECODER (EXT-2) function” on page 32.
- Otherwise, you will not be able to watch scrambled channels.



## Connecting the power cord to the AC outlet

Insert the AC plug on the power cord from the TV into an AC outlet. The power lamp will light and the TV will enter standby mode.

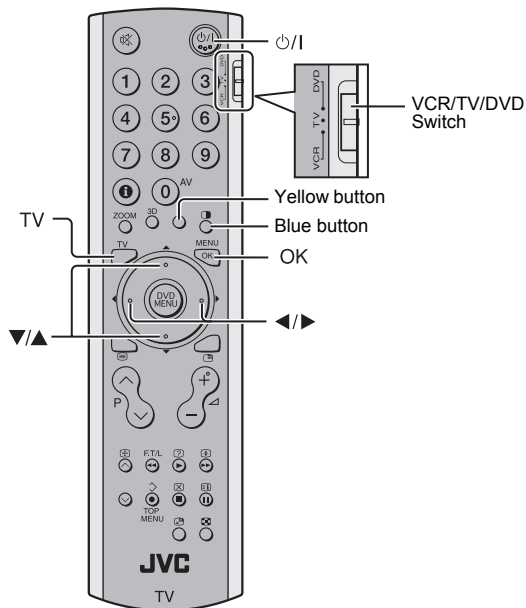
### Caution

- Operate only from the power source specified (AC 110 – 240 V, 50/60 Hz) on the unit.

- Remove the AC plug from the outlet to completely disconnect the TV from the power supply.

# Initial settings

When the TV is first turned on, it enters the initial setting mode, and the JVC logo is displayed. Follow the instructions on the on-screen display to make the initial settings.



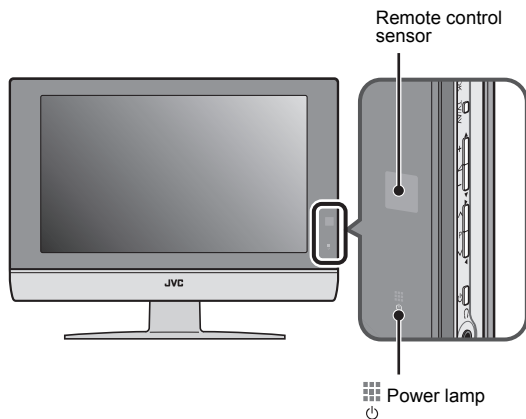
## 1 Make sure to set the VCR/TV/DVD switch to the TV position.

- You cannot turn the TV on when the VCR/TV/DVD switch is set to the VCR or DVD position.

## 2 Press the P/I button on the remote control

The TV turns on from standby mode and the JVC logo is displayed.

- Check that the AC plug on the power cord from the TV is connected to AC outlet.



- If the JVC logo does not appear this is because your TV has already been turned on for the first time: use the "LANGUAGE" and "AUTO PROGRAM" functions to make the initial settings. For details, see "INSTALL" on page 27.

## 3 Press the OK button

The LANGUAGE menu appears.

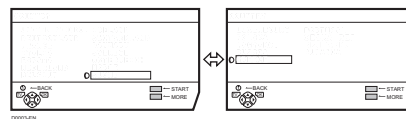


## 4 Press the Left/Right and Up/Down buttons to choose ENGLISH. Then press the OK button

The on-screen display will then be in English.

The COUNTRY menu appears as a sub-menu of the AUTO PROGRAM function.

There are two COUNTRY menus. Pressing the yellow button changes the COUNTRY menu as follows:



## 5 Press the Left/Right and Up/Down buttons to choose the country where you are

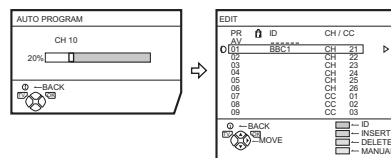
- For users in the UK:

To receive SKY 1 you need a satellite tuner. You must have the satellite tuner set to SKY 1 before starting the AUTO PROGRAM function which follows.

## 6 Press the blue button to start the AUTO PROGRAM function

The AUTO PROGRAM menu appears and received TV channels are automatically stored in the programme numbers (PR).

- To cancel the AUTO PROGRAM function: Press the TV button.



After the TV channels have been registered in the programme numbers (PR), the EDIT menu appears

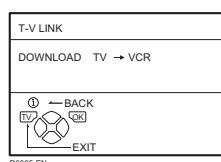
- If you want to, you can now edit the programme numbers (PR) using the EDIT/MANUAL function. For details, see "EDIT/MANUAL" on page 28.
- If you do not want to edit programme numbers (PR), go to the next step.

## If "ACI START/ACI SKIP" appears in the AUTO PROGRAM menu:

You can use the ACI (Automatic Channel Installation) function to decode the ACI data and complete the registration of all the TV channels quickly. For details of the ACI function and how to use it, see "Using the ACI function" on page 31.

If you don't want to use the ACI function, press the Up/Down buttons to choose ACI SKIP and then press OK.

## 7 Press the **OK** button to display the T-V LINK menu



## 8 If you do not have a T-V LINK compatible VCR connected:

Press the **TV** button to exit the T-V LINK menu. The T-V LINK menu disappears.

## If you have a T-V LINK compatible VCR connected to the EXT-2 terminal:

Follow the operating procedure “Downloading data to a VCR” on page 31 to transmit the programme number (PR) data.

**Now, the initial settings are complete, and you can watch the TV**

### • When the COUNTRY setting is UNITED KINGDOM:

BBC1, BBC2, ITV, Channel 4 and Channel 5 are automatically set to the programme numbers PR1 to PR5. If the TV doesn't receive one of these TV channels, that programme number (PR) will not be set. Programme number PR6 is not normally set.

### • When the COUNTRY setting is not UNITED KINGDOM:

If your TV can detect the TV channel name from the TV channel broadcast signal, the TV channel name is assigned to the programme number (PR) to which the TV channel has been set. However, which TV channels are set to which programme numbers (PR) will depend on the area in which you live.

- If a TV channel you want to view is not set to a programme number (PR), you can set it using the **MANUAL** function. For details, see “EDIT/MANUAL” on page 28.
- The **AUTO PROGRAM** function does not set the programme number PR 0 (AV) for your video cassette recorder. You will need to set this using the **MANUAL** function.
- In some areas you may get TV reception from more than one transmitter, for example different ITV regions. In this case each TV channel could be set twice. If this happens, the first set of channels will have the stronger signal. If you want to delete the second set of channels, you will have to do it manually (see page 30).

#### For users in the UK:

If you have any problems setting up your new TV, please call the **JVC** Helpline on **0870 330 5000**.

#### For users in the Republic of Ireland:

If you have any problems setting up your new TV, please call the **JVC** Helpline on **1890-582500**.

## T-V LINK functions

When you have a T-V LINK compatible VCR connected to the EXT-2 Terminal on the TV, it is easier to set up the VCR and to view videos. T-V LINK uses the following features:

### To use T-V LINK functions:

A “T-V LINK compatible VCR” means a JVC video cassette recorder with the T-V LINK logo, or with one of the following logos. However, these VCRs may support some or all of the features described earlier. For details, see your VCR instruction manual.

- “Q-LINK” (a trademark of Panasonic Corporation)
- “Data Logic” (a trademark of Metz Corporation)
- “Easy Link” (a trademark of Phillips Corporation)
- “Megalogic” (a trademark of Grundig Corporation)
- “SMARTLINK” (a trademark of Sony Corporation).

### ■ Pre-set download

The VCR will automatically download the registered data on the TV channels from the TV. This means you do not need to set up the program channels on your VCR manually. The preset download function automatically begins when the initial setting is complete or whenever you carry out the **AUTO PROGRAM** or **EDIT/MANUAL** functions.

You can also carry out this function using your VCR controls.

### When “FEATURE NOT AVAILABLE” is displayed:

If “FEATURE NOT AVAILABLE” is displayed, the download was not performed correctly. Before trying to download again, check that:

- the VCR power is turned on
- the VCR is T-V LINK compatible
- the VCR is connected to the EXT-2 terminal
- the SCART cable is fully wired.

### ■ Direct Rec

“What You See Is What You Record”

You can easily record to VCR the images that you are watching on the TV.

For details, read the manual for your VCR.

Use your VCR controls. “VCR IS RECORDING” is displayed.

**In the following situations, the VCR will stop recording if the TV is turned off, if the TV channel or input is changed, or if the menu is displayed on the TV:**

- when recording images from an external device connected to the TV (for example a camcorder)
- when recording a TV channel after it has been unscrambled on a decoder
- when recording a TV channel by using the TV's output because the VCR's own tuner cannot properly receive that channel.

When the VCR is not ready (for example when there is no tape inserted), “NO RECORDING” is displayed.

You cannot carry out Direct Rec using your TV's control. Generally, the VCR cannot record a TV channel that it cannot receive properly on its own tuner, even if you can view that TV channel on the TV. However, some VCRs can record a TV channel by using the TV's output if that channel can be viewed on the TV. For details, see your VCR instruction manual.

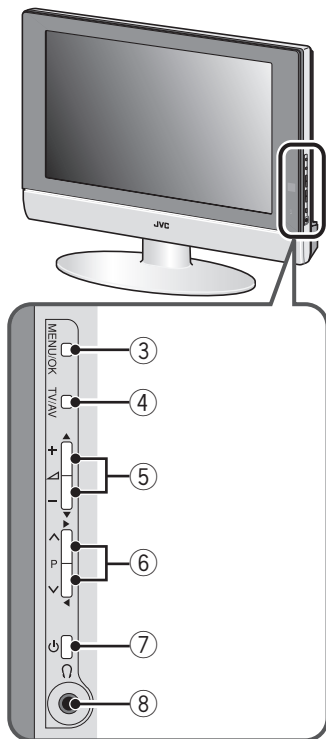
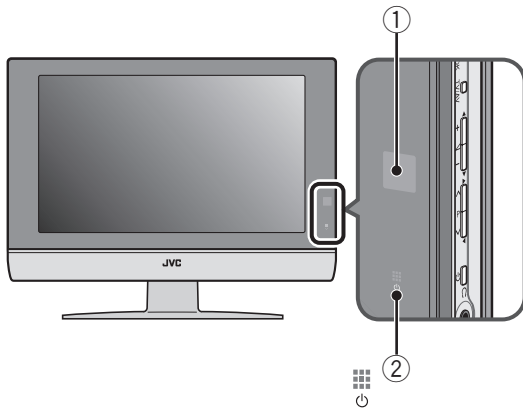
### ■ TV auto power on/VCR image view

When the VCR starts playing, the TV automatically turns on and the images from the EXT-2 terminal appear on the screen.

When the VCR menu is operated, the TV automatically turns on and the images from the EXT-2 terminal appear on the screen.

- Check that the AC plug on the power cord from the TV is connected to an AC outlet.

# TV buttons and functions



Refer to the pages in parentheses for details.

- ① Remote control sensor
- ② Power lamp (page 7)
- ③ MENU/OK button (pages 9, 17)
- ④ TV/AV button (page 9)
- ⑤ (Volume) +/- buttons (page 9)
- ⑥ P V/Δ buttons (page 9)
- ⑦ (Stand by) button (page 9)
- ⑧ Headphone jack (mini jack) (page 33)

## Turn the TV on from standby mode

**Press the button or P V/Δ buttons to turn the TV on from standby mode**

When the TV is turned on, the power lamp dims slightly.

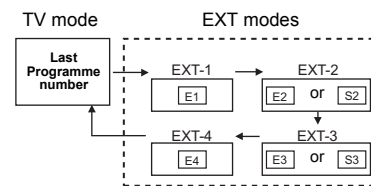
- Check that the AC plug on the power cord from the TV is connected correctly to an AC outlet.

## Choose a TV channel

**Press the P V/Δ buttons to choose a programme number (PR) or an EXT terminal**

## Watch images from external devices

**Press the TV/AV button to choose an EXT terminal**



## Adjust the volume

**Press the buttons**

The volume level indicator appears.

## Using the headphone

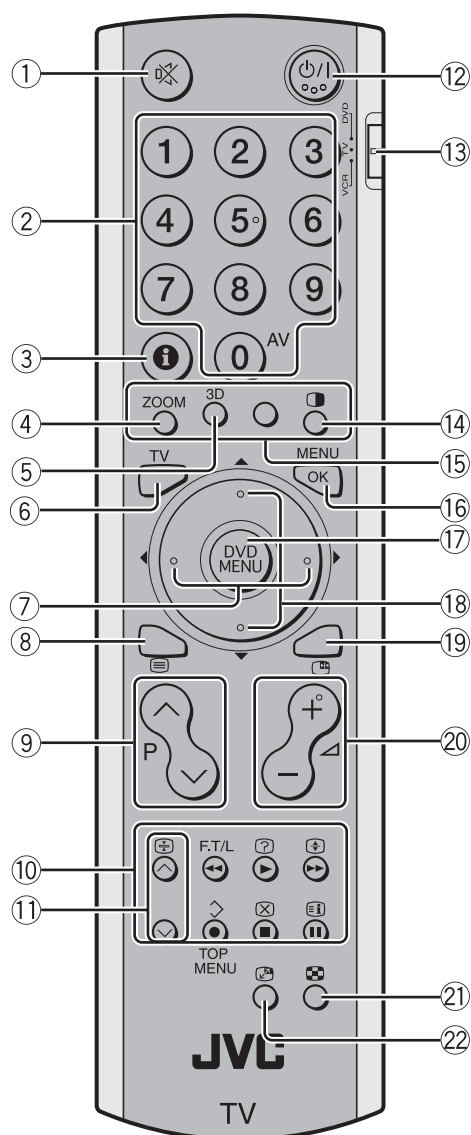
- The headphone volume is adjusted with the “HEADPHONE” menu (see page 22).

## Using the Menu

**Use the MENU/OK button.**

Refer to “Using the TV’s menu” (see page 17) for details of using the menu.

# Remote control buttons and functions



- ① Muting button
- ② Number buttons
- ③ Information button
- ④ **ZOOM** button
- ⑤ **3D** sound button
- ⑥ **TV** button
- ⑦ ◀▶ buttons
- ⑧ [Text] button
- ⑨ **P** V/Δ buttons
- ⑩ VCR/DVD/Teletext control buttons
- ⑪ V/Δ buttons
- ⑫ Standby button
- ⑬ VCR/TV/DVD switch
- ⑭ [ ] button
- ⑮ Colour buttons
- ⑯ **OK** button
- ⑰ **DVD MENU** button
- ⑱ ▼/▲ buttons
- ⑲ [ ] button
- ⑳ -/+ buttons
- ㉑ [ ] button
- ㉒ [ ] button

## Turn the TV on or off from standby mode

### 1 Make sure to set the VCR/TV/DVD switch to the TV position.

- You cannot turn the TV on or off when the VCR/TV/DVD switch is set to the VCR or DVD position.

### 2 Press the ⏻ (standby) button to turn the TV on or off.

When the TV is turned on, the power lamp dims slightly.

- The power can be turned on by pressing the **TV** button, **P** V/Δ buttons or Number buttons.
- Check that the AC plug on the power cord from the TV is connected to an AC outlet.

## Choose a TV channel

### ■ Use the number buttons:

Enter the programme number (PR) of the channel using the number buttons.

Example:

- PR 6 → press **6**
- PR 12 → press **1** and **2**

### ■ Use the **P** V/Δ buttons:

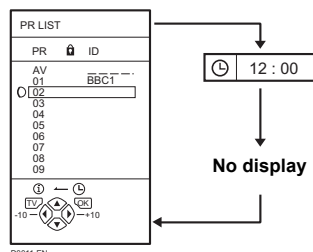
Press the **P** V/Δ buttons to choose the programme number (PR) you want.



## ■ Use the PR LIST:

### 1 Press the **i** (information) button to display the PR LIST

Pressing the **i** (information) button changes the display as follows:



### 2 Press the **◀/▶** and **▼/▲** buttons to choose a programme number (PR). Then press the **OK** button

- For programme numbers (PR) with the CHILD LOCK function set, the **⏸** (CHILD LOCK) mark appears next to the programme number (PR) in the PR LIST.
- You cannot use the **▼/▲** buttons to choose a programme number (PR) with the CHILD LOCK function set.
- Even if you try to choose a programme number (PR) with the CHILD LOCK function set, the **⏸** (CHILD LOCK) mark will appear, and you cannot watch the TV channel. To watch the TV channel, see "CHILD LOCK" on page 25.

## Adjust the volume

### Press the **◀ -/+** buttons to adjust the volume.

The volume indicator appears and the volume changes as you press the **◀ -/+** buttons.

- The headphone volume is adjusted with the "HEADPHONE" menu (see page 22).

## ■ Muting the sound

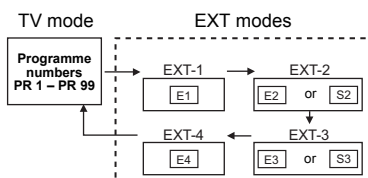
### Press the **⏸** (muting) button to turn off the sound.

Pressing the **⏸** (muting) button again restores the previous volume level.

## Watch images from external equipment

### ■ Use the **0 (AV)** button:

#### Press the **0 (AV)** button to choose an EXT terminal.



### ■ Use the **P ▼/▲** buttons:

#### Press the **P ▼/▲** buttons to choose an EXT terminal.

## ■ Use the PR LIST:

### 1 Press the **i** (information) button to display the PR LIST

### 2 Press the **◀/▶** and **▼/▲** buttons to choose an EXT terminal. Then press the **OK** button

- The EXT terminals are registered after the programme number PR 99.
- You can choose a video input signal from the S-VIDEO signal (Y/C signal) and regular video signal (composite signal). For details, see "S-IN (S-VIDEO input)" on page 23.
- If you do not have a clear picture or no colour appears, change the colour system manually. See "COLOUR SYSTEM" on page 20.
- This TV set has a function which can automatically change over the input according to a special signal output from an external device. (The EXT-4 terminal does not support this function.)

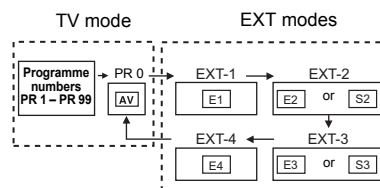
### To return to a TV channel:

Press the **TV** button or the number buttons.

### To use the programme number PR 0 (AV):

When the TV and VCR are connected only by the aerial cable, choosing the programme number PR 0 (AV) allows you to view images from the VCR. Set the VCR RF channel to the programme number PR 0 (AV) manually. For details, see "EDIT/MANUAL" on page 28.

Pressing the **0 (AV)** button changes the choice as follows:



- The VCR sends its playback image along the aerial cable as an RF (radio frequency) signal.
- Also see your VCR instruction manual.

## ZOOM function

You can change the screen size according to the picture aspect ratio. Choose the optimum one from the following ZOOM modes.

### AUTO:

When a WSS (Wide Screen Signalling) signal, which shows the aspect ratio of the picture, is included in the broadcast signal or the signal from an external device, the TV automatically changes the ZOOM mode to 16:9 ZOOM mode or FULL mode according to the WSS signal. If a WSS signal is not included, the picture is displayed in accordance with the ZOOM mode set with the 4:3 AUTO ASPECT function.

- For details of the 4:3 AUTO ASPECT function, see “4:3 AUTO ASPECT” on page 20.
- When the AUTO (WSS) mode does not function correctly due to poor WSS signal quality or when you want to change the ZOOM mode, press the **ZOOM** button and change to another ZOOM mode.

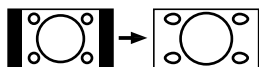
### REGULAR:

Use to view a normal picture (4:3 aspect ratio) as this is its original shape.



### PANORAMIC:

This stretches the left and right sides of a normal picture (4:3 aspect ratio) to fill the screen, without making the picture appear unnatural.



- The top and bottom of the picture are slightly cut off.

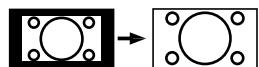
### 14:9 ZOOM:

This zooms up the wide picture (14:9 aspect ratio) to the upper and lower limits of the screen.



### 16:9 ZOOM:

This zooms up the wide picture (16:9 aspect ratio) to the full screen.



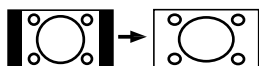
### 16:9 ZOOM SUBTITLE:

This zooms up the wide picture (16:9 aspect ratio) with subtitles to the full screen.



### FULL:

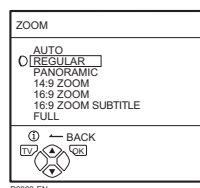
This uniformly stretches the left and right sides of a normal picture (4:3 aspect ratio) to fill the wide TV screen.



- For 16:9 aspect ratio pictures that have been squeezed into a normal picture (4:3 aspect ratio), use the FULL mode to restore the picture to its original shape.

## Choose the ZOOM mode

### 1 Press the **ZOOM** button to display the ZOOM menu



- The **ZOOM** button does not work in the twin pictures mode.

### 2 Press the **▼/▲** buttons to choose a ZOOM mode. Then press the **OK** button

The picture expands and the chosen ZOOM mode is displayed in about 5 seconds.

- The ZOOM mode may be automatically changed by the control signal from an external device. When you want to return to the previous ZOOM mode, choose the ZOOM mode again.

## Adjusting the visible area of the picture

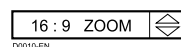
If subtitles or the top (or bottom) of the picture are cut off, you can adjust the visible area of the picture manually.

### 1 Press the **ZOOM** button

The ZOOM menu appears.

### 2 Press the **OK** button to display the ZOOM mode indicator

The indicator appears.



### 3 While it is displayed, press the **▼/▲** buttons to change the position of the picture

- You cannot adjust the visible area in REGULAR or FULL mode.

## 3D SOUND function

You can enjoy sounds with a wider ambience.

### Press the **3D** button to turn the 3D SOUND function on or off

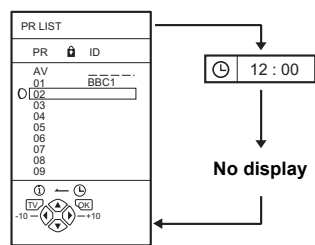
- The 3D SOUND function does not work properly with mono sound.
- The 3D SOUND function can be also turned on or off by using the SOUND SETTING menu. For details, see “3D SOUND” on page 21.

## Displaying the current time

You can display the current time on the screen.

### Press the **i** (information) button to display the current time

Pressing the **i** (information) button changes the display as follows:



- This TV uses teletext data to set the current time. If the TV has not received a TV channel that has teletext programmes since it was turned on, the time display is blank. To see the time, choose a TV channel that has teletext programmes.
- When watching videos, an incorrect current time is sometimes displayed.

## Return to TV channel instantly

You can return to a TV channel instantly.

### Press the **TV** button

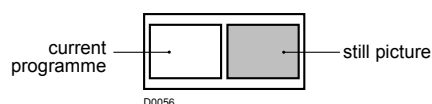
The TV returns to the TV mode and a TV channel appears.

## Using the FREEZE function

You can view the current programme as a still picture.

### 1 Press the **Freeze** button

The still picture of the current picture will appear.



### To cancel the FREEZE function:

Press the **Freeze** button, the **P** **V**/**A** buttons or the number buttons.

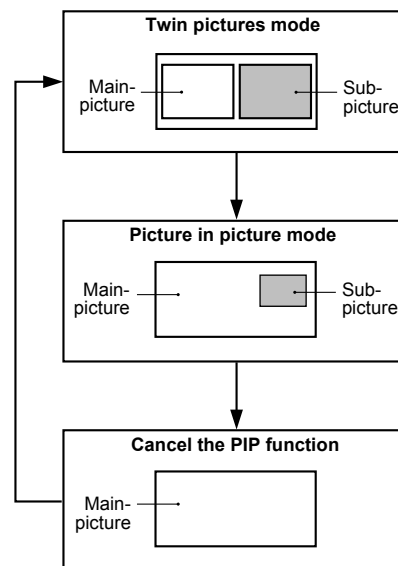
- The FREEZE function does not work while a sub-picture is displayed.
- The still picture cannot be output from the TV.

## Using the PIP function

You can view two pictures (Main-picture and sub-picture). A TV programme and a video programme from an external device can be watched at the same time.

### 1 Press the **PIP** button

Pressing the **PIP** button changes the PIP mode as follows:



D0057

### 2 Press the **V**/**A** buttons to change the sub-picture to the picture from another EXT terminal

#### Listening to the sound of the sub-picture:

You can listen to the sound of the sub-picture with the headphones while listening to the sound of the main-picture from the TV speakers.

For details, see "HEADPHONE" on page 22.

- The sub-picture sound is mono.

#### Changing the position of the sub-picture:

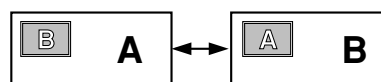
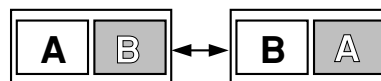
You can choose one of four positions.

For details, see "PIP (picture-in-picture)" on page 20.

#### Swapping the main-picture and sub-picture:


Press the **Swap** button.




The main-picture and sub-picture will be swapped.



D0051

### Cancelling the PIP function:

Press the  button or **TV** button.

- If the main-picture signal is poor, the quality of the sub-picture may also be poor.
- If the pictures have different standards, the top and bottom of one of them may be missing.
- If an external device is operated, the sub-picture may disappear. If this happens, press the  button again to redisplay the sub-picture.
- You cannot view a scrambled channel in the sub-picture. If the  (swap) button is pressed when viewing a scrambled channel in the main-picture using an external decoder, the channel you have been viewing in the sub-picture will appear in both the main-picture and sub-picture.
- The ZOOM function does not work in the twin-picture mode.
- Do not press the  (swap) button while you are recording the TV output on the VCR. If you do, the TV output signal will change.
- The BLUE BACK function does not work in the twin picture mode or the picture-in-picture mode.
- PIP function does not work for a picture of 1125i signal. See "EXT-4 terminal" on page 38 for more information on this type of signal.
- A picture of 625p or 525p signal cannot be displayed as the sub-picture. See "EXT-4 terminal" on page 38 for more information on these types of signals. Pay attention to the following.
  - When the EXT-4 picture is a picture of 625p or 525p signal, you cannot choose EXT-4 with the  $\vee/\wedge$  buttons.
  - When the EXT-4 picture signal is changed to 625p, 525p or 1125i signal while the EXT-4 picture is displayed as the sub-picture, the PIP function is cancelled.
  - The pictures cannot be swapped when a picture of 625p or 525p signal from EXT-4 is being displayed as the main picture.
- The sub-picture cannot be output from the TV.

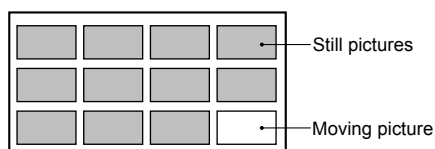
## Using the MULTI-PICTURE function

You can display multi-pictures so you can find a program you want to view.

### 1 Press the button to display multi-pictures

The channels are displayed in the channel number order. The multi-pictures will appear in multi-picture mode.

#### 12-pictures multi:



D0058-EN

### 2 Press the $\vee/\wedge$ buttons to choose the screen you want to see

The chosen picture changes to a moving picture.

### 3 Press the **OK** button

The multi-pictures disappear and the chosen picture appears.

#### Cancelling the multi-pictures:

Press the **TV** button, the number buttons or the **OK** button.

- Pictures from external devices cannot be displayed in the 12-pictures multi mode.

## Operating a JVC brand VCR or DVD player

These buttons will operate a JVC brand VCR or DVD player. Pressing a button that looks the same as the device's original remote control button has the same effect as the original remote control.

### 1 Set the VCR/TV/DVD switch to the VCR or DVD position

#### VCR:

When you are using a VCR, set the switch to the VCR position. You can turn the VCR on or off with the  $\odot/\text{I}$  (Standby) button.

#### DVD:

When you are using a DVD player, set the switch to the DVD position. You can turn the DVD player on or off with the  $\odot/\text{I}$  (Standby) button.

### 2 Press the VCR/DVD Control Button to control your VCR or DVD player

- If your device is not made by JVC, these buttons will not work.
- Even if your device is made by JVC, some of these buttons may not work, depending on the device you are using.
- You can use the  $\vee/\wedge$  buttons to choose a TV channel the VCR will receive, or choose the chapter the DVD player plays back.
- Some models of DVD player use the  $\vee/\wedge$  buttons for both operating the fast forward/backward functions and for choosing the chapter. In this case, the  $\blacktriangleleft/\blacktriangleright$  buttons do not work.
- Set the VCR/TV/DVD switch to the TV position when you turn the TV on or off.

### ■ To use DVD MENU button

Some DVDs allow you to select the disc contents using the menu. When you playback these DVDs, you can select the subtitle language and sound-track language, etc. by using the DVD menu.

### 1 Press **DVD MENU** button during play back

The DVD menu appears on the screen.

- Press **DVD MENU** button again to resume playback at the scene when you pressed the button.

### 2 Press $\blacktriangledown/\blacktriangle$ or $\blacktriangleleft/\blacktriangleright$ buttons to select the desired item

### 3 Press **OK** button

The menu continues to another screen.

Repeat steps 2 and 3 to set additional items if any.

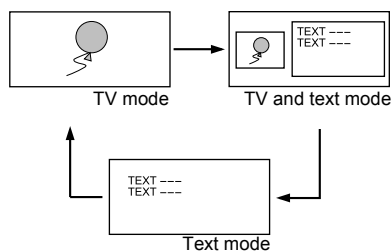
# Teletext function

## Basic operation

- 1 Choose a TV channel with a teletext broadcast
- 2 Make sure you set the VCR/TV/DVD switch to the TV position.



- 3 Press **[Text]** button to display the teletext  
Pressing **[Text]** (Text) button changes the mode as follows:



D1043

- 4 Choose a teletext page by pressing the **P**  $\nabla/\wedge$  buttons, number buttons or colour buttons

**To return to the TV mode:**

Press the **TV** button or **[Text]** (Text) button.

- If you have trouble receiving teletext broadcasts, consult your local dealer or the teletext station.
- The ZOOM function will not work in the TV and text mode or Text mode.
- You cannot operate menus when viewing a teletext programme.
- Language display depends on the country which was set on the COUNTRY menu. If characters on a Teletext programme do not appear properly, change the COUNTRY Setting to other country's. For detail, "Changing the COUNTRY setting" on page 32.

## Using the List Mode

You can store the numbers of your favourite teletext pages in memory and call them up quickly using the colour buttons.

### ■ To store the page numbers:

- 1 Press **F.T/L** button to go into the List mode

The page numbers you have stored are displayed at the bottom of the screen.

- 2 Press a Colour button to choose a position. Then press the Number buttons to enter the page number



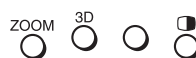
- 3 Press and hold down **[Store]** button

The four page numbers blink white to show that they are stored in memory.

### ■ To call up a stored page:

- 1 Press the **F.T/L** button to engage the List mode

- 2 Press a colour button having a stored page



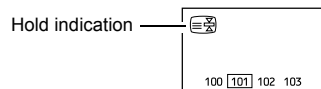
**To exit the List mode:**

Press the **F.T/L** button again.

## Hold

You can hold a teletext page on the screen for as long as you want, even while several other teletext pages are being received.

**Press the **[Hold]** button**



**To cancel the Hold function:**

Press **[Hold]** button again.

---

## Sub-page

---

Some teletext pages include sub-pages that are automatically displayed.

### 1 Choose a teletext page that includes sub-pages

Sub-page numbers that can be viewed are automatically displayed at the top of the screen.

### 2 Press the ◀/▶ buttons to choose a sub-page number

---


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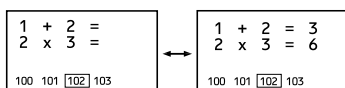
## Reveal

---

Some teletext pages include hidden text (such as the answers to a quiz).

You can display the hidden text.

**Each time you press the  (Reveal) button, text is hidden or revealed**




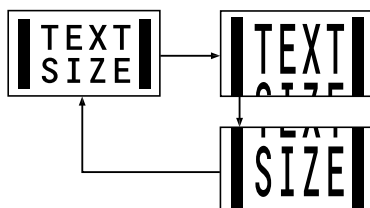
---

## Size

---

You can double the height of the teletext display.

**Press the  (Size) button.**




---

## Index

---

You can return to the index page instantly.

**Press the  (Index) button**

Returns to page 100 or a previously specified page.

---

## Cancel

---

You can search for a teletext page while watching TV.


### 1 Press the number button to enter a page number, or press a colour button

The TV searches for a teletext page.

### 2 Press the (Cancel) button

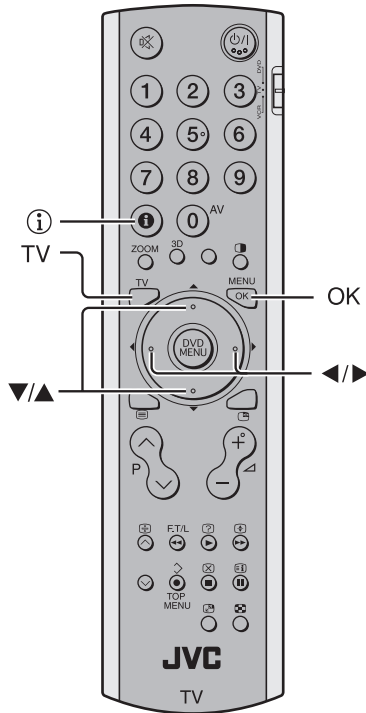
The TV programme appears. When the TV finds the teletext page, its page number appears in the upper left of the screen.

### 3 Press the (Cancel) button to return to a teletext page when the page number is on the screen

- The TV mode cannot be resumed by pressing the  (Cancel) button. To return to the TV mode press **TV**.

# Using the TV's menu

This TV has a number of functions you can operate using menus. To use all your TV's functions, you need to understand the basic menu operating techniques fully.



## 3 Press the **▼/▲** buttons to choose a function

- For details of the functions in the menus, see the following pages.

## 4 Press the **◀/▶** buttons to choose the setting of that function

- If you want to operate a function which appears only with its name, follow the descriptions of that function on the following pages.
- The display appearing at the bottom of a menu shows you a button on the remote control that you can use when you operate a chosen function.

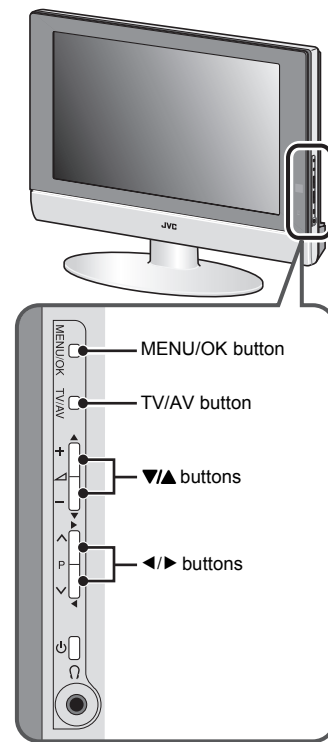
## 5 Press the **OK** button to complete the setting

The menu disappears.

- When watching the television with the NTSC system, the menus are displayed at about half of their normal vertical size.
- The menu will disappear if you press the **P** **▼/▲** buttons while the menu is displayed.

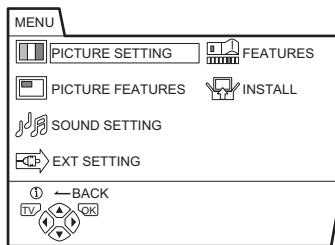
## Operation with the buttons on the TV

You can also operate the menus using the buttons on the front panel of the TV.

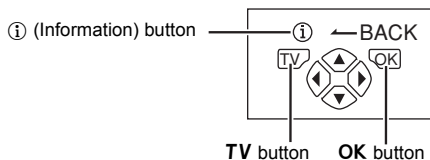


## Basic operation

### 1 Press the **OK** button to display the MENU (main menu)



- Press the **OK** button twice while watching the MULTI-PICTURE mode.
- The display appearing at the bottom of a menu shows the buttons on the remote control you can use when you operate a chosen function.



### 2 Press the **◀/▶** and **▼/▲** buttons to choose a menu title, and press the **OK** button

The menu appears.

**To return to the previous menu:**

Press the **ⓘ** (information) button.

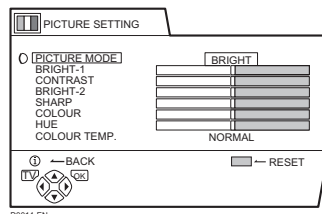
**To exit a menu instantly:**

Press the **TV** button.

The menu will disappear after about one minute if no operation is performed.

# PICTURE SETTING

Refer to “Using the TV’s menu” (see page 17) for details of displaying the menu.



## PICTURE MODE

You can choose one of three PICTURE MODEs to adjust the picture settings automatically.

### **BRIGHT:**

Heightens contrast and sharpness.

### **STANDARD:**

Standardizes picture adjustment.

### **SOFT:**

Softens contrast and sharpness.

## Picture Adjustment

You can change the picture settings of each PICTURE MODE mode as you like.

### **BRIGHT-1:**

You can adjust the back light.

◀ : darker

▶ : brighter

### **CONTRAST:**

You can adjust the picture contrast.

◀ : lower

▶ : higher

### **BRIGHT-2:**

You can adjust the picture brightness.

◀ : darker

▶ : brighter

### **SHARP:**

You can adjust the picture sharpness.

◀ : softer

▶ : sharper

### **COLOUR:**

You can adjust the picture colour.

◀ : lighter

▶ : deeper

### **HUE:**

You can adjust the picture tint.

◀ : reddish

▶ : greenish

- You can change the HUE setting (picture hue) when the colour system is NTSC 3.58, NTSC 4.43 or a signal from the EXT-4 terminal.  
However, you cannot do this when the PIP function main picture is set to EXT-4.

### **To return to the default settings in each PICTURE MODE mode:**

Press the blue button.

- This returns the picture settings in the PICTURE MODE mode you have chosen to the default settings, and stores them in the PICTURE MODE mode.

## COLOUR TEMP.

You can select one of three COLOUR TEMP. modes (three tones of white) to adjust the white balance of the picture. Since white is the colour which is used as a reference for all the other colours, changing the COLOUR TEMP. mode affects the appearance of all the other colours on the screen.

### **COOL:**

A bluish white. Using this mode when watching bright pictures allows you to enjoy a more vivid and bright picture.

### **NORMAL:**

The normal white colour.

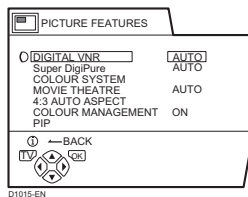
### **WARM:**

A reddish white. Using this mode when watching films allows you to enjoy colours that are characteristic of films.



# PICTURE FEATURES

Refer to “Using the TV’s menu” (see page 17) for details of displaying the menu.



## DIGITAL VNR

The DIGITAL VNR function cuts down the amount of ‘noise’ (‘snow’ or interference) in the original picture. You can choose from the three DIGITAL VNR function settings of AUTO, MIN and MAX.

### AUTO:

The TV will automatically adjust the level of the DIGITAL VNR effect to match the amount of noise in the picture, giving you the best possible picture.

- If you set the DIGITAL VNR effect too high it can make the picture less sharp. It is recommended to use the AUTO setting if you can.
- AUTO cannot be chosen when you are watching the EXT-4 picture.

### MIN:

The level of the DIGITAL VNR effect is set to the minimum. If you set the DIGITAL VNR function to AUTO but feel that the sharpness of the original picture has not been reproduced fully, change the setting from AUTO to MIN.

- The MIN setting is not suitable for low-quality pictures which contain a lot of noise.

### MAX:

The level of the DIGITAL VNR effect is set to the maximum. If you set the DIGITAL VNR function to AUTO but still notice some noise, change the setting from AUTO to MAX.

- The MAX setting is not suitable for high-quality pictures which contain very little noise.
- When a picture of 625p, 525p, or 1125i signal is being displayed, the AUTO setting cannot be chosen with the DIGITAL VNR function.
- See “EXT-4 terminal” on page 38 for more information on these types of signals.

## Super DigiPure

The Super DigiPure function uses the latest in digital technology to give you a natural-looking picture. The Super DigiPure function includes the following two functions.

### DigiPure function:

This function helps to create a natural-looking picture by eliminating unnecessary edges from high-contrast and crisp images. For images with low-contrast, edges are added to produce a sharper, more detailed picture.

You can choose from the three DigiPure function settings of AUTO, MIN and MAX.

- If you set the DigiPure effect too high on a low-quality picture that contains a lot of noise, this may actually make the noise worse. We recommend you use the AUTO setting if you can.

### Picture motion compensation function:

This function displays fast-moving pictures (for example, the players or ball in a football game) more smoothly and naturally on the screen.

- The effect level of the picture motion compensation function cannot be changed. The effect level is the same no matter which of the AUTO, MIN or MAX settings is used.

### 1 Choose Super DigiPure

### 2 Press the ◀/▶ buttons to choose a setting. Then press the OK button

### AUTO:

The TV will automatically adjust the level of the DigiPure effect to match the amount of noise in the picture, giving the best possible picture.

- AUTO cannot be chosen when you are watching the EXT-4 picture.

### MIN:

The level of DigiPure effect is set to the minimum. When you set the Super DigiPure function to AUTO and notice some noise, change the setting from AUTO to MIN.

- The MIN setting is not suitable for high-quality pictures which contain very little noise.

### MAX:

The level of DigiPure effect is set to the maximum. If you set the Super DigiPure function to AUTO but feel that the original picture quality has not been reproduced fully, change the setting from AUTO to MAX.

- The MAX setting is not suitable for low-quality pictures which contain a lot of noise.

### OFF:

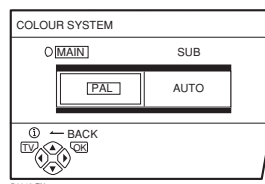
The Super DigiPure function is turned off.

## COLOUR SYSTEM

The colour system is chosen automatically. However, if the picture is not clear or no colour appears, choose the colour system manually.

### 1 Choose COLOUR SYSTEM. Then press the OK button

The sub-menu of the COLOUR SYSTEM function appears.



### 2 Press the ◀/▶ buttons to choose MAIN or SUB MAIN:

You can change the colour system of the main-picture.

#### SUB:

You can change the colour system of the sub-picture.

- Choose MAIN when a sub-picture is not displayed.

### 3 Press the ▼/▲ buttons to choose the appropriate colour system. Then press the OK button

#### PAL:

PAL system

#### SECAM:

SECAM system

#### NTSC 3.58:

NTSC 3.58 MHz system

#### NTSC 4.43:

NTSC 4.43 MHz system

#### AUTO:

This function detects a colour system from the input signal. You can only use this when you are viewing a picture from programme number PR 0 (AV), or an EXT terminal.

- The AUTO function may not function properly if you have poor signal quality. If the picture is abnormal in the AUTO function, choose another colour system manually.
- When in the programme numbers PR 0 (AV) to PR 99, you cannot choose NTSC 3.58 or NTSC 4.43. SECAM cannot be chosen when the COUNTRY setting is UNITED KINGDOM.

## MOVIE THEATRE

The MOVIE THEATRE function displays a cinema film picture more smoothly and naturally on the screen.

#### AUTO:

The television automatically recognizes the type of signal and turns the function on and off.

#### ON:

This function is turned on.

#### OFF:

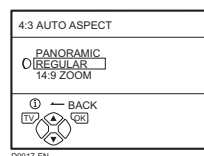
This function is turned off.

- The motion may appear unnatural when viewing images with the NTSC colour system. When the MOVIE THEATRE function is set to AUTO or ON, the motion may appear unnatural when viewing images with the NTSC colour system.
- You cannot select this function in the twin pictures mode or the picture in picture mode.

## 4:3 AUTO ASPECT

You can choose one of three ZOOM modes, REGULAR, PANORAMIC or 14:9 ZOOM, as the ZOOM mode for the normal picture (4:3 aspect ratio).

### 1 Choose 4:3 AUTO ASPECT then press the OK button



### 2 Press the ▼/▲ buttons to choose a ZOOM mode. Then press the OK button

## COLOUR MANAGEMENT

This TV supports the COLOUR MANAGEMENT function to ensure dull colours are compensated to produce natural hues.

The COLOUR MANAGEMENT function is on by default.

#### ON:

COLOUR MANAGEMENT function is turned on.

#### OFF:

COLOUR MANAGEMENT function is turned off.

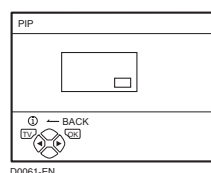
- Set this function to ON under normal conditions.

## PIP (picture-in-picture)

You can choose one of four positions for the sub-picture.

### 1 Press the ▼/▲ buttons to choose PIP. Then press the OK button

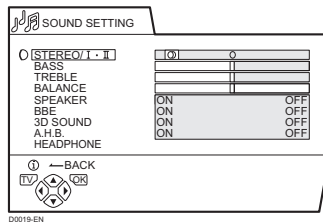
The PIP menu appears.



### 2 Press the ◀/▶ buttons to choose the position. Then press the OK button

# SOUND SETTING

Refer to “Using the TV’s menu” (see page 17) for details of displaying the menu.



## STEREO / I • II

When you are viewing a bilingual broadcast programme, you can choose the sound from Bilingual I (Sub I) or Bilingual II (Sub II). If you have poor reception on a stereo broadcast, you can change from stereo to mono sound so that you can hear the broadcast more clearly and easily.

∞: Stereo sound

○: mono sound

I: Bilingual I (sub I)

II: Bilingual II (sub II)

- The sound mode you can choose differs depending on the TV programme.
- This function does not work in the EXT modes. And this function does not appear in the SOUND SETTING menu.

## Sound Adjustment

You can adjust the sound to your liking.

### BASS:

You can adjust the low tone of the sound.

◀: weaker

▶: strong

### TREBLE:

You can adjust the high tone of the sound.

◀: weaker

▶: strong

### BALANCE:

You can adjust the volume balance between the left and right speaker.

◀: turn the left speaker's volume level up.

▶: turn the right speaker's volume level up.

## SPEAKER

You can turn off the sound from the TV speakers; but you should only do this if an audio system is connected to the TV as a substitute for the TV speakers.

### ON:

The TV speakers issue sound.

### OFF:

The TV speakers does not issue sound.

## BBE

You can use the BBE function to enjoy easy-to-listen sound that is faithful to the original sound recorded.

### ON:

This function is turned on.

### OFF:

This function is turned off.

- Licensed by BBE Sound, Inc. BBE is a registered trademark of BBE Sound, Inc.

## 3D SOUND

You can enjoy Surround sound with a “live” effect by using the 3D SOUND function.

### ON:

3D SOUND function is turned on.

### OFF:

3D SOUND function is turned off.

## A.H.B. (Active Hyper Bass)

Used when you want to emphasize the bass sound.

### ON:

This function is turned on.

### OFF:

This function is turned off.

---

## HEADPHONE

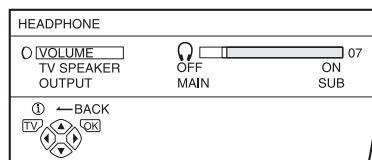
---

You need to use the HEADPHONE menu to adjust the volume of the headphones.

The HEADPHONE menu can also be used to set whether or not sound comes from the TV speakers when the headphones are being used and to perform the settings for the sound coming from the headphones.

### 1 Press the ▼/▲ buttons to choose HEADPHONE. Then press the OK button

The sub-menu of the HEADPHONE function appears.



### 2 Press the ▼/▲ buttons to choose a function. Then press the ◀/▶ buttons to change the setting

#### VOLUME:

You can change the volume of the headphones.

#### TV SPEAKER:

You can turn the TV's speakers on or off.

#### ON:

The sound comes from the TV's speakers when using the headphones.

#### OFF:

The sound does not come from the TV's speakers when using the headphones.

#### OUTPUT:

You can choose the sound output to the headphones.

#### MAIN:

You can listen to the sound of the main-picture with your headphones.

#### SUB:

You can listen to the sound of the sub-picture with your headphones.

- When the sub-picture is a television programme, the sound becomes monaural.

---

### 3 Press the OK button

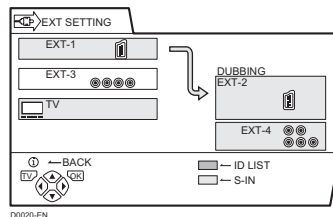
#### Hint:

When a sub-picture is displayed, the sound of the sub-picture can be listened to with the headphones while listening to the sound of the main-picture with the TV speakers. To do this, set TV SPEAKER to ON and OUTPUT to SUB.

- 
- Headphones do not work with sound adjusted for BASS and TREBLE, BBE effect sound, A.H.B. effect sound, and 3D SOUND effect sound.
-

# EXT SETTING

Refer to “Using the TV’s menu” (see page 17) for details of displaying the menu.



## S-IN (S-VIDEO input)

You can connect a device (such as an S-VHS VCR) to enjoy the high-quality picture of the S-VIDEO signal (Y/C signal).

### Preparation:

- First read the device’s instruction manual and “Additional preparation” on page 33 to connect the device to the TV properly. Second, follow the device’s instruction manual to set the device so that it sends an S-VIDEO signal (Y/C signal) to the TV.
- Do not set S-IN (S-VIDEO input) to the EXT terminal connected to a device which cannot output an S-VIDEO (Y/C signal). If it is set wrongly, a picture cannot appear.

#### 1 Choose an EXT terminal

#### 2 Press the yellow button and set the S-IN (S-VIDEO input).

##### Then press the OK button

An S-IN (S-VIDEO input) mark is displayed. You can view an S-VIDEO signal (Y/C signal) instead of the regular video signal (composite signal).

##### To cancel the S-IN (S-VIDEO input) setting:

Press the yellow button and turn off S-IN (S-VIDEO input) mark. The regular video signal (composite signal) pictures are resumed.

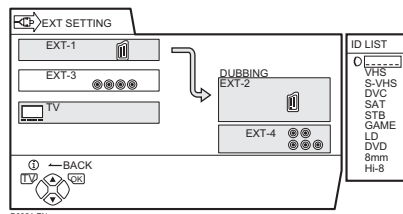
- The EXT-1 terminal does not support S-VIDEO signal (Y/C signal) and you cannot set S-IN (S-VIDEO input) in the EXT-1 terminal.
- Setting S-IN (S-VIDEO input) changes the head character from “E” to “S”. When an EXT terminal receives a normal video signal, “E2” or “E3” appears on the display. This changes to “S2” or “S3” when it receives an S-VIDEO signal.
- Even a device which can output an S-VIDEO signal (Y/C signal) may output a regular video signal (composite signal) depending on the device setting. If a picture cannot appear because the S-IN (S-VIDEO input) setting has been made, read the device instruction manual carefully again to check for the device settings.

## ID LIST

You can have a name corresponding to the devices connected for each EXT terminal. Giving a name to an EXT terminal makes the EXT terminal number appear on the screen, together with the name.

#### 1 Choose an EXT terminal

#### 2 Press the blue button to display the name list (ID LIST)



#### 3 Press the ▼/▲ buttons to choose a name. Then press the OK button

The ID LIST disappears and the name is assigned to the EXT terminal.

- You cannot assign an EXT terminal name not found in the name list (ID LIST).

**To erase a name assigned to the EXT terminal:**  
Choose a blank space.

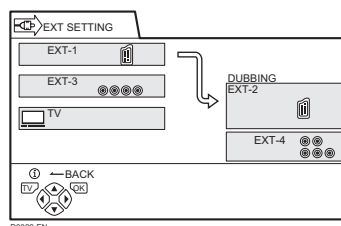
#### 4 Press the OK button to complete the setting

## DUBBING

You can choose a signal source to be output from the EXT-2 terminal.

You can do this with the output signals of the devices connected to other EXT terminals, or with the picture and sound from a TV channel you are currently viewing.

#### 1 Press the ◀/▶ buttons to choose the arrow from the menu



---

**2 Press the ▼/▲ buttons to choose an EXT terminal or TV.**

**Then press the OK button**

The arrow in the menu represents a signal flow. The left side of the arrow shows a signal source output from the EXT-2 terminal.

**EXT-1/EXT-3:**

The output signal of the device connected to an EXT terminal passes through the TV and is output from the EXT-2 terminal.

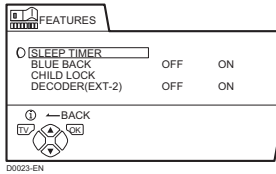
**TV:**

The picture and sound of the TV channel you are currently viewing are output from the EXT-2 terminal.

- 
- During dubbing, you cannot turn off the TV. Turning off the TV also turns off the output from the EXT-2 terminal.
  - When you choose an EXT terminal as an output, you can view a TV programme or a picture from the other EXT terminal while dubbing the picture from a device connected to the EXT terminal onto a VCR connected to the EXT-2 terminal.
  - The RGB signals from the TV games cannot be output. Teletext programmes cannot be output.
-

# FEATURES

Refer to “Using the TV’s menu” (see page 17) for details of displaying the menu.

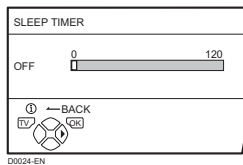


## SLEEP TIMER

You can set the TV to automatically turn off after a specified period of time.

### 1 Choose SLEEP TIMER, then press the OK button

A Sub-menu of the SLEEP TIMER function appears.



### 2 Press the ◀/▶ buttons to set the period of time. Then press the OK button

You can set the period of time up to a maximum of 120 minutes (2 hours) in 10 minute steps.

- One minute before the SLEEP TIMER function turns off the TV, “GOOD NIGHT!” appears.
- The SLEEP TIMER function cannot be used to turn off the TV’s main power.
- When the SLEEP TIMER function is on, you can display the sub-menu of the SLEEP TIMER function again to confirm or change the remaining period of time of the SLEEP TIMER function. Press the OK button to leave the menu after confirming or changing the remaining time.

#### To cancel the SLEEP TIMER function:

Press the ◀ button to set a period of time to “OFF”.

## BLUE BACK

You can set the TV to automatically change to a blue screen and mute the sound if the signal is weak or absent, or when there is no input from an external device.

#### ON:

This function is turned on.

#### OFF:

This function is turned off.

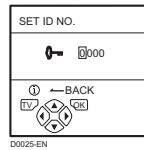
## CHILD LOCK

When there is a TV channel you do not want your children to watch, you can use the CHILD LOCK function to lock out the TV channel. Even when a child chooses a programme number (PR) for a locked TV channel the screen will change to blue and display (CHILD LOCK) so the TV channel cannot be viewed. Unless you enter a pre-set ID number by a special operation, the lock cannot be released and the child cannot view the TV channel.

## ■ To set the CHILD LOCK function

### 1 Choose CHILD LOCK, then press the 0 (AV) button

“SET ID NO.” (ID number setting screen) appears.



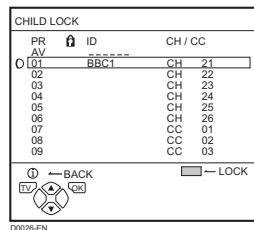
### 2 Set the ID number to your liking

1 Press the ▼/▲ buttons to choose a number.

2 Press the ◀/▶ buttons to move the cursor.

### 3 Press the OK button

The Sub-menu of CHILD LOCK appears.



### 4 Press the ▼/▲ buttons to choose a TV channel

Every time you press the ▼/▲ buttons, the Programme number (PR) changes, and the picture of the TV channel registered in the Programme number (PR) is displayed on the screen.

### 5 Press the blue button and set the CHILD LOCK function.

Then press the OK button

(CHILD LOCK) appears and the TV channel is locked.

#### To reset the CHILD LOCK function:

Press the blue button again.

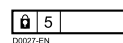
(CHILD LOCK) disappears.

To disable easy resetting of the CHILD LOCK function, the menu disappears if you choose the CHILD LOCK function and press the OK button.

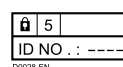
## ■ To view a locked TV channel

### 1 Choose a programme number (PR) of a locked TV channel with the number buttons or PR LIST

The screen changes to blue and the (CHILD LOCK) appears. You cannot view the TV channel.



### 2 Press the ⓘ (information) button to display “ID NO.” (ID No. input screen)



### 3 Press the Number buttons to enter the ID number

The lock is temporarily released so you can view the TV channel.

#### **If you have forgotten the ID number:**

Perform step 1 of “To set the CHILD LOCK function”. After confirming the ID number, press the **TV** button to exit the menu.

- Even if you reset the lock temporarily, it does not mean that the CHILD LOCK function set for the TV channel is cancelled. The next time anyone tries to view the TV channel, it will be locked again.
- When you want to cancel the CHILD LOCK function, you must perform the operation “To set the CHILD LOCK function” again.
- To stop it being easy to choose the programme number (PR) of a locked TV channel, the programme number (PR) has been set so that it cannot be chosen with the ▼/▲ buttons or the buttons of the TV.
- To stop it being easy to reset the lock, “ID NO.” (ID No. input screen) is set so that it cannot appear unless you press the ⓘ (information) button.

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## DECODER (EXT-2)

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You can only use this function if you have a decoder connected to a T-V LINK compatible VCR, which in turn is connected to the EXT-2 terminal. To use this function, see “Using the DECODER (EXT-2) function” on page 32.

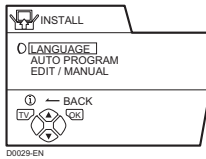
### **Caution**

- If you have not connected a decoder with a T-V LINK compatible VCR to the EXT-2 terminal, setting this function to “ON” by mistake causes the picture/sound of a TV channel you are currently viewing to disappear.



# INSTALL

Refer to “Using the TV’s menu” (see page 17) for details of displaying the menu.



## LANGUAGE

You can choose the language you want to use for the on-screen display from the language list in a menu.

### 1 Choose LANGUAGE, then press the OK button

A sub-menu of the LANGUAGE function appears.



### 2 Press the ◀/▶ and ▼/▲ buttons to choose a language. Then press the OK button

## AUTO PROGRAM

You can automatically store the TV channels for which you have the best reception. Store them in the TV’s programme numbers (PR) list by doing the following.

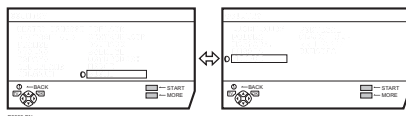
**For users in the UK:**

To receive SKY 1 you need a satellite tuner. You must have the satellite tuner set to SKY 1 before starting the AUTO PROGRAM function.

### 1 Choose AUTO PROGRAM. Then press the OK button

The COUNTRY menu appears as a sub-menu of the AUTO PROGRAM function.

There are two COUNTRY menus. Pressing the yellow button changes the COUNTRY menu as follows:

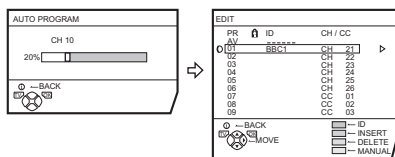


### 2 Press the ◀/▶ and ▼/▲ buttons to choose the country where you are now located

### 3 Press the blue button to start the AUTO PROGRAM function

The AUTO PROGRAM menu appears and the TV channels you receive are automatically registered in the programme numbers (PR) list.

- To cancel the AUTO PROGRAM function, press the TV button.



After the TV channels have been registered in the programme numbers (PR), the EDIT menu appears.

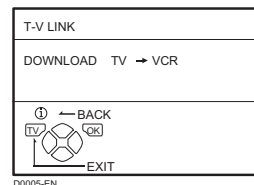
- You can now edit the programme numbers (PR) using the EDIT/MANUAL function. For details, see “EDIT/MANUAL” on page 28.
- If you do not need to use the EDIT/MANUAL function, go to the next step.

### If “ACI START/ACI SKIP” appears in the AUTO PROGRAM menu:

You can use the ACI (Automatic Channel Installation) function to decode the ACI data and complete the registration of all the TV channels quickly. For details of the ACI function and how to use it, refer to “Using the ACI function” on page 31.

If you don’t want to use the ACI function, press the ▼/▲ buttons to choose ACI SKIP and then press OK.

### 4 Press the OK button to display the T-V LINK menu



### 5 If you do not have a T-V LINK compatible VCR connected:

Press the TV button to leave the T-V LINK menu.

The T-V LINK menu disappears and all the settings are completed.

### If you have a T-V LINK compatible VCR connected to the EXT-2 terminal:

See “Downloading data to a VCR” on page 31 to transmit the programme number (PR) data to the VCR.

- If a TV channel you want to view is not set to a programme number (PR), set it manually using the MANUAL function. For details, see “EDIT/MANUAL” on page 28.
- The AUTO PROGRAM function does not set the programme number PR 0 (AV) for your video cassette recorder. You will need to set this using the manual function.
- In some areas you may get TV reception from more than one transmitter, for example, different ITV regions. In this case each TV channel could be set twice. If this happens, the first set of channels will have the stronger signal. If you want to delete the second set of channels, you will have to do it manually (see page 30).

## EDIT/MANUAL

The EDIT/MANUAL functions are divided into two types:

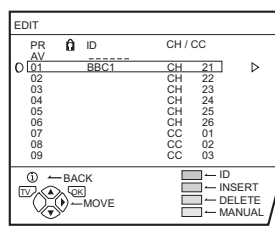
- editing the current programme numbers (PR) (EDIT functions); and
- manually storing a TV channel you want to view on a particular programme number (PR) (MANUAL function).

Here are the details about these functions:

### Caution

- Using the MOVE, DELETE or INSERT functions rewrites the current programme numbers (PR) list. Therefore, the programme numbers (PR) of some of the TV channels will change.
- Using the MANUAL function for a TV channel for which the CHILD LOCK function has been set cancels the CHILD LOCK function for that channel.
- Using the MANUAL function for a TV channel for which the DECODER (EXT-2) function has been set to ON returns the setting of the DECODER (EXT-2) function for that channel to OFF.
- When a TV channel has already been registered in PR 99, using the INSERT function deletes that TV channel.

### 1 Choose EDIT/MANUAL, then press the OK button



- For programme number PR 0, "AV" appears in the programme numbers (PR) list.
- An EXT terminal number does not appear in the programme numbers (PR) list.
- The CH/CC number is a number unique to the TV and corresponds to the channel number of a TV channel. For the relationship between a channel number and a CH/CC number, see "CH/CC numbers" on page 35.

### 2 Follow the operation description of a function you want to use and operate the function

#### MOVE:

This function changes a programme number (PR) of a TV channel.

#### ID:

This function registers a channel name (ID) to a TV channel.

#### INSERT:

This function adds a new TV channel in the current programme numbers (PR) list by using the CH/CC number.

- You cannot use the INSERT function if you do not know a channel number of a TV channel. Use the MANUAL function to register a TV channel in the programme number (PR).

#### DELETE:

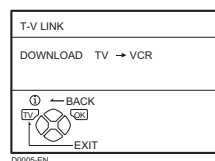
This function deletes a TV channel you do not want to list.

#### MANUAL:

This function manually stores a new TV channel in a programme number (PR).

### 3 Press the OK button to complete the settings

The T-V LINK menu appears.



### 4 If you do not have a T-V LINK compatible VCR connected:

Press the **TV** button to exit the T-V LINK menu.

The T-V LINK menu disappears and all the settings are completed.

### If you have a T-V LINK compatible VCR connected to the EXT-2 terminal:

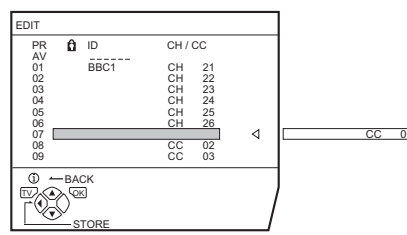
Follow the operating procedure "Downloading data to a VCR" on page 31 to transmit the Programme number (PR) data to the VCR.

## ■ MOVE

### 1 Press the ▼/▲ buttons to choose a TV channel

Every time you press the ▼/▲ buttons, the programme number (PR) changes and the picture of the TV channel stored in the programme number (PR) appears on the screen.

### 2 Press the ► button to start the MOVE function



### 3 Press the ▼/▲ buttons to choose a new programme number (PR)

#### To cancel the MOVE function:

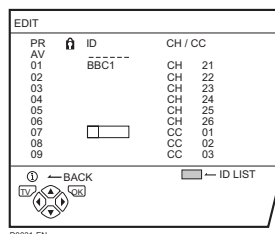
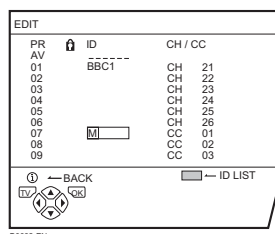
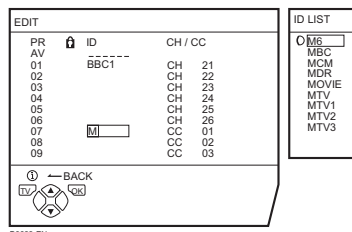
Press the **i** (information) button.

### 4 Press the ◀ button to change the programme number (PR) of a TV channel to a new programme number (PR)

## ■ ID

**1 Press the ▼/▲ buttons to choose a TV channel**

Every time you press the ▼/▲ buttons, the programme number (PR) changes and the picture of the TV channel stored in the programme number (PR) appears on the screen.

**2 Press the red button to start the ID function****3 Press the ▼/▲ buttons to choose the first character of a channel name (ID) you want to give to the TV channel****4 Press the blue button to display the ID LIST (channel name list)****5 Press the ▼/▲ buttons to choose the channel name (ID)**

**To cancel the ID function:**  
Press the ⓘ (information) button.

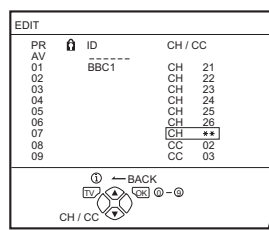
**6 Press the OK button to give a channel name (ID) to a TV channel**

- You can give your own unique channel name (ID) to the TV channel. When you have finished step 3, do not go to step 4. Press the ◀/▶ buttons to move the cursor, and press the ▼/▲ buttons to choose each character of the channel name (ID). Then press the OK button to register the channel name (ID) to the TV channel.

## ■ INSERT

**Preparation:**

- A CH/CC number unique to this TV and corresponding to the Channel number of a TV channel is required. Find the corresponding CH/CC number from a table "CH/CC numbers" on page 35 based on the Channel number of the TV channel.
- When the COUNTRY setting is not FRANCE, use a two-digit CH/CC number. When the COUNTRY setting is FRANCE, use a three-digit CH/CC number.
- Only when you add a TV channel (SECAM-L system) from a French station, be sure to set COUNTRY to FRANCE. If the COUNTRY setting is not FRANCE, follow the description "Changing the COUNTRY setting" on page 32 to change the COUNTRY setting to FRANCE, then start the INSERT function.

**1 Press the ▼/▲ buttons to choose a programme number (PR) for which you will register a new TV channel****2 Press the green button and start the INSERT function**

**To cancel the INSERT function:**  
Press the ⓘ (information) button.

**3 When the COUNTRY setting is UNITED KINGDOM:**

**Press the number buttons to enter the remaining CH number**

- You cannot enter CC numbers.

**When the COUNTRY setting is not UNITED KINGDOM:**

**Press the ▼/▲ buttons to choose "CH" or "CC", then press the number buttons to enter the remaining CH or CC number**

**When the COUNTRY setting is FRANCE:**

Choose "CH1", "CH2", "CC1" or "CC2".

The TV shifts to registration mode.

When the registration is completed, the picture of the TV channel appears on the screen.

- The CH/CC number is a number given to each broadcast frequency that carries a TV channel. If the TV cannot detect the TV channel corresponding to the broadcast frequency indicated by the CH/CC number, a "no-signal" picture appears.

## ■ DELETE

### 1 Press the ▼/▲ buttons to choose a TV channel

Every time you press the ▼/▲ buttons, the programme number (PR) changes and the picture of the TV channel stored in the programme number (PR) appears on the screen.

### 2 Press the yellow button to delete the TV channel

The TV channel is deleted from the programme numbers (PR) list.

## ■ MANUAL

### Preparation:

- If you register a TV channel (SECAM-L system) from a French station, be sure to set the COUNTRY setting to FRANCE. If the COUNTRY setting is not FRANCE, follow the description "Changing the COUNTRY setting" on page 32 to change the COUNTRY setting to FRANCE, then start the MANUAL function.

### 1 Press the ▼/▲ buttons to choose a Programme number (PR) to which you want to register a new TV channel

### 2 Press the blue button to activate the MANUAL function

MANUAL		
PR	ID	CH / CC
AV	BBC1	CH 21
01		CH 22
02		CH 23
03		CH 24
04		CH 25
05		CH 26
06		CC 01 (B / G)
07		CC 02
08		CC 03
09		

① ← BACK

TV SYSTEM

SEARCH+

SEARCH-

FINE+

FINE-

### To cancel the MANUAL function:

Press the ① (information) button.

### When the COUNTRY setting is not UNITED KINGDOM:

At the right side following the CH/CC number, the SYSTEM (broadcasting system) of the TV channel appears.

### 3 When the COUNTRY setting is UNITED KINGDOM:

Continue to step 4

### When the COUNTRY setting is not UNITED KINGDOM:

Press the ► button to choose the SYSTEM (broadcasting system) for a TV channel you want to register

### TV channel (SECAM-L system) from a French station:

Set the SYSTEM to "L". If it is set to one other than "L", you cannot receive the TV channel of the SECAM-L system.

### Other TV channels:

If you do not know the correct broadcasting system, set the SYSTEM to "B/G". If "B/G" is not correct, it results in the fact that you will not hear the sound normally when the TV detects a TV channel. In this case, retry to set the SYSTEM again correctly so that no problem arises.

### 4 Press the green or red button to search for a TV channel

Scanning stops when the TV finds a TV channel. Then the TV channel is displayed.

### 5 Press the green or red button repeatedly until the TV channel you want appears

#### If the TV channel reception is poor:

Press the blue or yellow button to fine-tune the TV channel.

#### If you cannot hear the normal sound even when the picture of the TV channel appears normally:

The SYSTEM setting is wrong. Press the ► button and choose a SYSTEM that has normal sound.

### 6 Press the OK button and register the TV channel to a programme number (PR)

The normal EDIT menu is resumed.

# Additional menu operations

## Using the ACI function

This TV has an ACI function which decodes the ACI (Automatic Channel Installation) data.

Using the ACI function allows all TV channels transmitted from the cable TV station to be properly registered quickly according to the data from the cable TV station.

### Caution

- If your cable TV station broadcasts ACI data and if “ACI START/ACI SKIP” appears in the AUTO PROGRAM menu, the ACI function is enabled. In all other cases, it is disabled.

- 1 Press the **▼/▲** buttons to choose ACI START. Then press the **OK** button to start the ACI function

#### When you don't want to use the ACI function:

Press the **▼/▲** buttons to choose ACI SKIP and then press the **OK** button.

#### If the AUTO PROGRAM menu changes to another menu:

Depending on your cable TV station, there may be a broadcast selection menu set up by the cable TV station. Follow the menu and use the **◀/▶** and **▼/▲** buttons. After you have made the setting, press the **OK** button.

#### If “ACI ERROR” is displayed in the AUTO PROGRAM menu:

“ACI ERROR” means that the ACI function is not working properly. Press the **OK** button to start the ACI function again.

If “ACI ERROR” still appears even after you have tried to start the ACI function several times, press the **▶** button to start the AUTO PROGRAM function. It does not cause any problem because all the TV channels are registered to the Programme numbers (PR) by the AUTO PROGRAM function.

- 2 When the settings are completed, the EDIT menu is displayed. Return to the instructions that you were reading before, and continue the operation

#### When the “Initial settings” have been made:

Return to step 6 of “Initial settings” on page 8.

#### When the “AUTO PROGRAM” has finished:

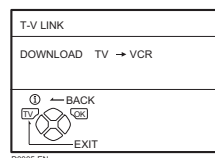
Return to step 4 of “AUTO PROGRAM” on page 27.

- If you have any questions about the items in the Broadcast Selection menu or how to operate the menu, please contact your cable TV station.
- When the cable TV broadcast reception is poor, the ACI function will not work properly.
- If there is an error in the ACI data itself, the TV channel cannot be registered properly. If this happens, turn the ACI function off (ACI SKIP) and use the AUTO PROGRAM function. Or, use the EDIT/MANUAL function to correct the programme number (PR) setting.

## Downloading data to a VCR

You can send the latest programme numbers (PR) data to a VCR with the T-V LINK function.

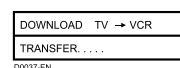
- You can only do this when a T-V LINK compatible VCR is connected to the EXT-2 terminal.
- This only works when the T-V LINK menu is being displayed.



- 1 Turn on the VCR

- 2 Press the **OK** button

The data transmission begins.



The T-V LINK menu disappears once the data transmission ends.

#### When the T-V LINK menu changes over to another menu:

The TV has finished its menu. This new menu is operated from the VCR. See the VCR instruction manual for what to do next.

If “FEATURE NOT AVAILABLE” appears at the T-V LINK menu, check the following three items.

- Has a T-V LINK compatible VCR been connected to the EXT-2 terminal?
- Has the VCR power been turned on?
- Does the SCART cable that connects the EXT-2 terminal to the T-V LINK compatible VCR have all its proper connections?

Then press the **OK** button to retry data transmission.

## Changing the COUNTRY setting

After the AUTO PROGRAM function is completed, you can change the country you have already set by using the AUTO PROGRAM function.

When registering the TV channels for French broadcast stations (SECAM-L system), perform this operation to change the country.

### 1 Display the INSTALL menu

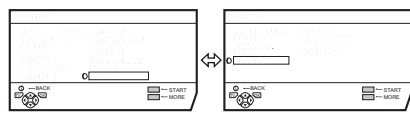
**When the EDIT menu is currently being displayed:**

Press the **i** (information) to return to the INSTALL menu.

### 2 Press the ▼/▲ buttons to choose AUTO PROGRAM. Then press the OK button

A COUNTRY menu appears as a sub-menu of the AUTO PROGRAM function.

There are two COUNTRY menus. Pressing the yellow button changes the COUNTRY as follows:



### 3 Press the ◀/▶ and the ▼/▲ buttons to choose a country

### 4 Press the OK button to complete the setting

The menu disappears.

**To return to the INSTALL menu from the COUNTRY menu:**

Press the **i** (information) button instead of the OK button.

## Using the DECODER (EXT-2) function

If you have a decoder connected to a T-V LINK compatible VCR, which in turn is connected to the EXT-2 terminal, use the DECODER (EXT-2) function to unscramble the scrambled TV channels.

### 1 Turn on the decoder power

### 2 Display the scrambled TV channel on the TV

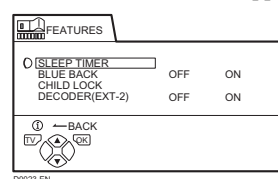
Even if the decoder is working, a scrambled picture appears.

### 3 Press the OK button to display the MENU

The MENU (main menu) appears.

### 4 Press the ▼/▲ buttons to choose FEATURES. Then press the OK button

The FEATURES menu appears.



### 5 Press the ▼/▲ buttons to choose DECODER (EXT-2). Then press the ◀/▶ buttons to choose ON

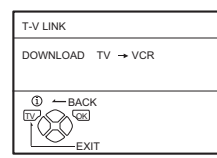
An unscrambled picture appears.

**To cancel the DECODER (EXT-2) function:**

Press the ◀/▶ buttons to choose OFF.

### 6 Press the OK button to complete the setting

The T-V LINK menu appears.



### 7 Follow "Downloading data to a VCR" on page 31 to transmit the programme number (PR) data to the VCR

### 8 If you have another TV channel you want to unscramble using a decoder, repeat steps 2 to 7

If the DECODER (EXT-2) function has been set to "ON" but the TV channel cannot be unscrambled, check the following:

- Has the decoder been connected to the VCR properly according to the VCR and decoder instruction manuals?
- Has the decoder power been turned on?
- Can the TV channel be unscrambled with a decoder?
- Do you need to change the VCR settings in order to connect the decoder? Confirm that the VCR is set properly by rechecking the VCR Instruction manual.

# Additional preparation

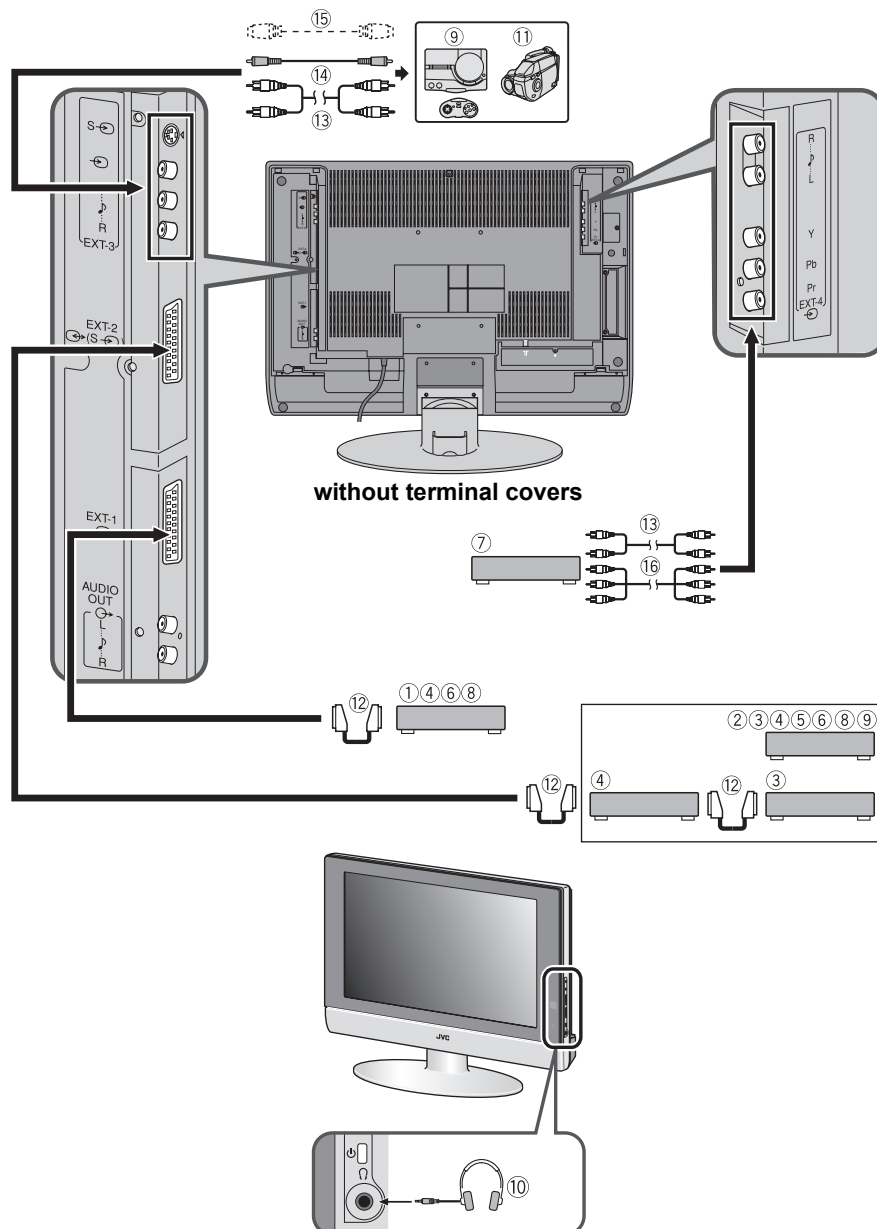
## Connecting external equipment

Connect the equipment to the TV, making the correct rear panel and front panel connections.

### Before connecting anything:

- Read the manuals that came with the equipment.  
Depending on the equipment, the connection method may be different from the diagram. Also, the equipment settings may need to change depending on the connection method.
- Turn off all the equipment including the TV.
- The "Specifications" on page 38 give the details of the EXT terminals. If you are connecting equipment not listed in the following connection diagram, see the table to choose the best EXT terminal.
- Connecting cables are not supplied.

- ① VCR (composite signal)
- ② VCR (composite signal/S-VIDEO signal)
- ③ T-V LINK compatible VCR (composite signal/S-VIDEO signal)
- ④ Decoder
- ⑤ DVD player (composite signal/S-VIDEO signal)
- ⑥ DVD player (composite signal/RGB signal)
- ⑦ DVD player (component video signals; Pr/Pb/Y)
- ⑧ TV game (composite signal/RGB signal)
- ⑨ TV game (composite signal/S-VIDEO signal)
- ⑩ Headphones
- ⑪ Camcorder (composite signal/S-VIDEO signal)
- ⑫ SCART cable
- ⑬ Audio cable
- ⑭ Video cable
- ⑮ S-VIDEO cable
- ⑯ Component cable





### ■ Equipment which can output the S-VIDEO signal (Y/C signal) such as an S-VHS VCR

Connect the equipment to an EXT terminal (but not the EXT-1 terminal).

You can choose between an S-VIDEO signal (Y/C signal) and a regular video signal (composite signal). For details of how to operate the equipment, see "S-IN (S-VIDEO input)" on page 23.

### ■ T-V LINK compatible VCR

Be sure to connect the T-V LINK compatible VCR to the EXT-2 terminal. If not, the T-V LINK function will not work properly.

- When connecting a T-V LINK compatible VCR to the EXT-2 terminal, be sure to connect the decoder to the VCR. If not, the T-V LINK function may not work properly. After you have stored TV channels in the programme numbers (PR) list, set the DECODER (EXT-2) function for the programme number (PR) to ON to unscramble a scrambled TV channel. For details, see "Using the DECODER (EXT-2) function" on page 32.

### ■ Connecting headphones

Connect the headphones with a stereo mini-jack (3.5 mm diameter) to the headphone socket at the TV.

- The headphone volume is adjusted with the "HEADPHONE" menu (see page 22).

### ■ Video or sound signal output from the EXT-2 terminal

You can change over the output of the video/sound signal from the EXT-2 terminal. This is useful when you want to dub the video/sound from another device onto the VCR connected to the EXT-2 terminal. For details on how to do this, see "DUBBING" on page 23.

### ■ TV output from the EXT-1 terminal

The video/sound signal of a TV channel you are viewing is always output from the EXT-1 terminal.

- Changing over a programme number (PR) also changes over the TV output from the EXT-1 terminal.
- The video/sound signal from an EXT terminal cannot be output.
- Teletext programmes cannot be output.

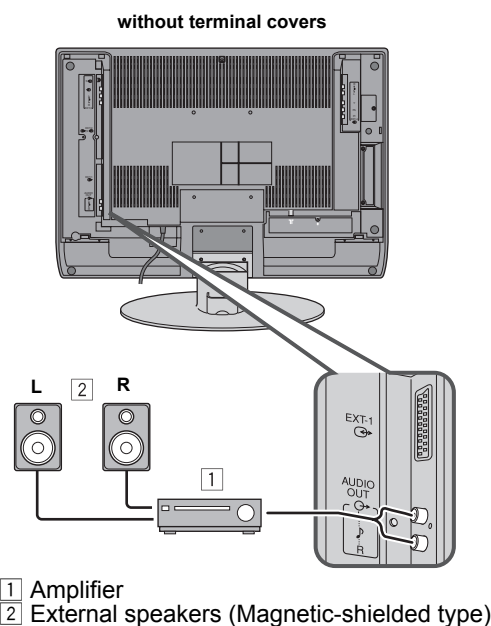
### ■ Connecting Speakers/Amplifier

See the Audio equipment connection diagram, then connect the audio equipment you desire to the TV.

You can use external front speakers to listen to the TV sound instead of the TV speakers.

#### Before connecting anything:

- Read the manuals provided with the amplifier and speakers.
- Turn the TV and amplifier off.
- To prevent magnetism from the speakers adversely affecting the TV screen, use magnetically-shielded speakers for the front speakers.
- Note that connecting cables are not supplied.



- The output from the AUDIO OUT terminal is not interrupted by headphone connection to the TV. You cannot cut the sound from the front speaker even if you connect a headphone to the TV.
- Adjust the volume of the external speakers with the amplifier.



# CH/CC numbers

When you want to use the INSERT function on page 29, find the CH/CC number corresponding to the Channel number of the TV channel from this table.

CH	Channel	CH	Channel	CC	Channel	CC	Channel
CH 02 / CH 202	E2, R1	CH 40 / CH 240	E40, R40	CC 01 / CC 201	S1	CC 31 / CC 231	S31
CH 03 / CH 203	E3, ITALY A	CH 41 / CH 241	E41, R41	CC 02 / CC 202	S2	CC 32 / CC 232	S32
CH 04 / CH 204	E4, ITALY B, R2	CH 42 / CH 242	E42, R42	CC 03 / CC 203	S3	CC 33 / CC 233	S33
CH 05 / CH 205	E5, ITALY D, R6	CH 43 / CH 243	E43, R43	CC 04 / CC 204	S4	CC 34 / CC 234	S34
CH 06 / CH 206	E6, ITALY E, R7	CH 44 / CH 244	E44, R44	CC 05 / CC 205	S5	CC 35 / CC 235	S35
CH 07 / CH 207	E7, ITALY F, R8	CH 45 / CH 245	E45, R45	CC 06 / CC 206	S6	CC 36 / CC 236	S36
CH 08 / CH 208	E8, R9	CH 46 / CH 246	E46, R46	CC 07 / CC 207	S7	CC 37 / CC 237	S37
CH 09 / CH 209	E9, ITALY G	CH 47 / CH 247	E47, R47	CC 08 / CC 208	S8	CC 38 / CC 238	S38
CH 10 / CH 210	E10, ITALY H, R10	CH 48 / CH 248	E48, R48	CC 09 / CC 209	S9	CC 39 / CC 239	S39
CH 11 / CH 211	E11, ITALY H+1, R11	CH 49 / CH 249	E49, R49	CC 10 / CC 210	S10	CC 40 / CC 240	S40
CH 12 / CH 212	E12, ITALY H+2, R12	CH 50 / CH 250	E50, R50	CC 11 / CC 211	S11	CC 41 / CC 241	S41
CH 21 / CH 221	E21, R21	CH 51 / CH 251	E51, R51	CC 12 / CC 212	S12	CC 75 / CC 275	X
CH 22 / CH 222	E22, R22	CH 52 / CH 252	E52, R52	CC 13 / CC 213	S13	CC 76 / CC 276	Y, R3
CH 23 / CH 223	E23, R23	CH 53 / CH 253	E53, R53	CC 14 / CC 214	S14	CC 77 / CC 277	Z, ITALY C, R4
CH 24 / CH 224	E24, R24	CH 54 / CH 254	E54, R54	CC 15 / CC 215	S15	CC 78 / CC 278	Z+1, R5
CH 25 / CH 225	E25, R25	CH 55 / CH 255	E55, R55	CC 16 / CC 216	S16	CC 79 / CC 279	Z+2
CH 26 / CH 226	E26, R26	CH 56 / CH 256	E56, R56	CC 17 / CC 217	S17		
CH 27 / CH 227	E27, R27	CH 57 / CH 257	E57, R57	CC 18 / CC 218	S18		
CH 28 / CH 228	E28, R28	CH 58 / CH 258	E58, R58	CC 19 / CC 219	S19		
CH 29 / CH 229	E29, R29	CH 59 / CH 259	E59, R59	CC 20 / CC 220	S20		
CH 30 / CH 230	E30, R30	CH 60 / CH 260	E60, R60	CC 21 / CC 221	S21		
CH 31 / CH 231	E31, R31	CH 61 / CH 261	E61, R61	CC 22 / CC 222	S22		
CH 32 / CH 232	E32, R32	CH 62 / CH 262	E62, R62	CC 23 / CC 223	S23		
CH 33 / CH 233	E33, R33	CH 63 / CH 263	E63, R63	CC 24 / CC 224	S24		
CH 34 / CH 234	E34, R34	CH 64 / CH 264	E64, R64	CC 25 / CC 225	S25		
CH 35 / CH 235	E35, R35	CH 65 / CH 265	E65, R65	CC 26 / CC 226	S26		
CH 36 / CH 236	E36, R36	CH 66 / CH 266	E66, R66	CC 27 / CC 227	S27		
CH 37 / CH 237	E37, R37	CH 67 / CH 267	E67, R67	CC 28 / CC 228	S28		
CH 38 / CH 238	E38, R38	CH 68 / CH 268	E68, R68	CC 29 / CC 229	S29		
CH 39 / CH 239	E39, R39	CH 69 / CH 269	E69, R69	CC 30 / CC 230	S30		

CH	Channel	CH	Channel	CC	Frequency (MHz)	CC	Frequency (MHz)
CH 102	F2	CH 141	F41	CC 110	116 - 124	CC 152	391 - 399
CH 103	F3	CH 142	F42	CC 111	124 - 132	CC 153	399 - 407
CH 104	F4	CH 143	F43	CC 112	132 - 140	CC 154	407 - 415
CH 105	F5	CH 144	F44	CC 113	140 - 148	CC 155	415 - 423
CH 106	F6	CH 145	F45	CC 114	148 - 156	CC 156	423 - 431
CH 107	F7	CH 146	F46	CC 115	156 - 164	CC 157	431 - 439
CH 108	F8	CH 147	F47	CC 116	164 - 172	CC 158	439 - 447
CH 109	F9	CH 148	F48	CC 123	220 - 228	CC 159	447 - 455
CH 110	F10	CH 149	F49	CC 124	228 - 236	CC 160	455 - 463
CH 121	F21	CH 150	F50	CC 125	236 - 244	CC 161	463 - 469
CH 122	F22	CH 151	F51	CC 126	244 - 252		
CH 123	F23	CH 152	F52	CC 127	252 - 260		
CH 124	F24	CH 153	F53	CC 128	260 - 268		
CH 125	F25	CH 154	F54	CC 129	268 - 276		
CH 126	F26	CH 155	F55	CC 130	276 - 284		
CH 127	F27	CH 156	F56	CC 131	284 - 292		
CH 128	F28	CH 157	F57	CC 132	292 - 300		
CH 129	F29	CH 158	F58	CC 133	300 - 306		
CH 130	F30	CH 159	F59	CC 141	306 - 311		
CH 131	F31	CH 160	F60	CC 142	311 - 319		
CH 132	F32	CH 161	F61	CC 143	319 - 327		
CH 133	F33	CH 162	F62	CC 144	327 - 335		
CH 134	F34	CH 163	F63	CC 145	335 - 343		
CH 135	F35	CH 164	F64	CC 146	343 - 351		
CH 136	F36	CH 165	F65	CC 147	351 - 359		
CH 137	F37	CH 166	F66	CC 148	359 - 367		
CH 138	F38	CH 167	F67	CC 149	367 - 375		
CH 139	F39	CH 168	F68	CC 150	375 - 383		
CH 140	F40	CH 169	F69	CC 151	383 - 391		

- When two CH/CC numbers correspond to one Channel number, choose either one according to the current COUNTRY setting. When the COUNTRY setting is other than FRANCE, choose a two-digit CH/CC number. When the COUNTRY setting is FRANCE, choose a three-digit CH/CC number.
- Find the CH/CC number (CC110 to CC161) corresponding to the TV channel (SECAM-L system) from a French cable TV station, based on the broadcast frequency of the TV channel. When you do not know the broadcast frequency, please contact the cable TV station.
- The CH/CC numbers of CH102-CH169 and CC110-CC161 correspond to the TV channels being broadcast by a SECAM-L system. The other CH/CC numbers correspond to the TV channels being broadcast by a method other than a SECAM-L system.
- When the COUNTRY setting is UNITED KINGDOM, the TV can receive only channels CH21 to CH69.

# Troubleshooting

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If a problem arises while you are using the TV, please read this troubleshooting guide carefully before you ask to have the TV repaired. You may be able to fix it easily by yourself. For example, if the mains plug is disconnected from the mains outlet, or the TV aerial has problems, you may think there is a problem with the TV itself.

## Important:

- This troubleshooting guide only covers problems whose causes are not easy to decide. If you have a question when you are operating a function, read the page(s) for that function carefully, not this troubleshooting guide.
- If you follow the advice in this troubleshooting guide without any success, unplug the mains plug and ask for your TV to be repaired. Do not attempt to repair the TV by yourself or to remove the rear cover of the TV.

## ■ If you cannot turn on the TV

- Is the AC plug on the power cord from the TV is connected to an AC outlet?
- Make sure you set the VCR/TV/DVD switch to the TV position. You cannot turn the TV on when the VCR/TV/DVD switch is set to the VCR or DVD position.

## ■ If you cannot turn off the TV

- Make sure you set the VCR/TV/DVD switch to the TV position. You cannot turn the TV off when the VCR/TV/DVD switch is set to the VCR or DVD position.

## ■ No picture or no sound

- Have you chosen a TV channel with very poor reception? If so, the BLUE BACK function will be activated: the entire screen becomes blue, and the sound is muted. If you still want to view the TV channel, follow the description “BLUE BACK” on page 25 to change the BLUE BACK function setting to OFF.
- Have you set the SPEAKER function to OFF? Follow the description “SPEAKER” on page 21 to check the SPEAKER function setting.
- If the SYSTEM setting for a TV channel is incorrect, it may prevent the sound from being heard. Follow the description “EDIT/MANUAL” on page 28 to use the MANUAL function to try to change the SYSTEM setting.

## ■ Poor picture

- If noise (snow) totally blocks out the picture, there may be a problem with the aerial or aerial cable. Check the following to try to solve the problem:
  - Have the TV and aerial been connected properly?
  - Has the aerial cable been damaged?
  - Is the aerial pointing in the right direction?
  - Is the aerial itself faulty?
- If the TV or aerial suffers interference from other equipment, stripes or noise may appear in the picture. Move any equipment such as an amplifier, personal computer, or a hair drier, that can cause interference away from your TV. Or try moving the TV. If the aerial suffers interference from a radio tower or high-voltage wire, please contact your local dealer.
- If the TV suffers interference from signals reflecting from mountains or buildings, double-pictures (ghosting) will occur. Try to change the aerial’s direction or replace it with one with better directionality.
- Are your COLOUR SYSTEM settings correct? Follow the description “COLOUR SYSTEM” on page 20 to try to solve the trouble.
- Have the COLOUR and BRIGHT settings been adjusted properly? Follow the description “Picture Adjustment” on page 18 to try to adjust them properly.
- Videotaping teletext is not recommended because it may not record correctly.
- When viewing images from commercially available video software products, or videos from videotapes which have been recorded improperly, the top of the image may be distorted. This is due to the condition of the video signal. There is nothing wrong with the TV.




## ■ Poor sound

- Have you adjusted BASS or TREBLE properly? If not, follow the description “Sound Adjustment” on page 21.
- When TV channel reception is poor, it can be hard to hear stereo or bilingual sound. In this case, follow the description “STEREO / I • II” on page 21 to hear the sound more easily by changing it to a mono sound.

## ■ If the TV does not respond to the remote control

- Have the batteries of the remote control worn out? Follow the description “Putting the batteries into the Remote control” on page 5 and replace them with new batteries.
- Have you attempted to use the remote control from the sides or rear of the TV or from more than seven metres away from the TV? Use the remote control in the front of your TV or from less than seven metres away.
- When you are viewing a teletext programme, you cannot operate the menus. Press the **TV** button to return to the ordinary TV programme, and then try operating the menus.
- If the TV suddenly stops responding, disconnect the power cord of the TV from the AC outlet. Connect them to the AC outlet again to turn on the TV. If the TV returns to a normal state, it is not a failure.

## ■ Other concerns

- When the SLEEP TIMER function operates, the TV is automatically turned off. If the TV suddenly turns off, try to press the  (standby) button to turn on the TV once again. If the TV goes back to normal, there is no problem.
- When the TV is receiving a wide-screen signal (WSS) or a signal from an external device affecting the screen size, the ZOOM mode automatically changes. When you want to resume the previous ZOOM mode, press the **ZOOM** button again.
- It takes a short period of time from the time an operation such as changing channels is performed until an image is displayed. This is not a malfunction. This is the time required for the image to stabilize before it can be displayed.
- The TV may make a crackling sound due to a sudden change in temperature. The picture or sound may be normal. If you hear crackling sounds frequently while you are viewing the TV, there may be other causes. As a precaution, ask your service technician to inspect it.
- In the twin pictures mode the sub-picture may disappear when the external device is operated. If this happens, press the  button and display the sub-picture again.
- The headphone volume is adjusted with the "HEADPHONE" menu. It cannot be adjusted with the  (volume)  $-/+$  buttons.
- When TV SPEAKER in the "HEADPHONE" menu is ON, even if the headphones are connected, sound is emitted from the TV speaker. When you do not want to emit sound from the TV speaker, turn the setting OFF.
- The top of the TV and the screen may become hot during use but this has no affect on the performance of the TV. Make sure that the ventilation holes are not blocked.
- When the picture is unstable, the screen may become white for a moment. This happens when the signal which drives the liquid crystal is missing. This is not a fault.
- When a still image has been displayed for a long period, a faint residual image may remain on the screen for a short time after the power has been turned off or when another image is displayed. This is not a fault and the image will eventually disappear.

# Specifications

Item	Model	LT-32C31BUE/LT-32C31SUE	LT-32C31BJE/LT-32C31SJE
Broadcasting systems		CCIR B/G, I, D/K, L	
Colour systems		PAL, SECAM • The EXT terminals also support the NTSC 3.58/4.43 MHz system.	
Channels and frequencies		<ul style="list-style-type: none"> <li>E2-E12, E21-E69, S1-S41, X, Y, Z, Z+1, Z+2, ITALY A-H, ITALY H+1, ITALY H+2, F2-F10, F21-F69, R1-R12, R21-R69</li> <li>French cable TV channel of broadcast frequencies 116 - 172 MHz and 220 - 469 MHz</li> </ul>	
Sound-multiplex systems		A2 (B/G, D/K), NICAM (B/G, I, D/K, L) system	
Teletext systems		FLOF (Fastext), TOP, WST (World Standard System)	
Power requirements		110 - 240 V AC, 50/60 Hz	
Power consumption		177 W, Standby: 2.3 W	
Screen size		Viewable area 80.2 cm (measured diagonally)	
Display resolution		1280 × 768 (W-XGA)	
Audio output		Rated Power output: 10 W + 10 W	
Speakers		6.6 cm round × 2	
EXT-1 terminal		Euroconnector (21-pin, SCART) • Video input, Audio L/R inputs and RGB inputs are available. • TV broadcast outputs (Video and Audio L/R) are available.	
EXT-2 terminal		Euroconnector (21-pin, SCART) • Video input, S-VIDEO (Y/C) input, Audio L/R inputs and RGB inputs are available. • Video and Audio L/R outputs are available. • T-V LINK functions are available.	
EXT-3 terminal		RCA connectors × 3 S-VIDEO connector × 1 • Video input, S-VIDEO (Y/C) input and Audio L/R inputs are available.	
EXT-4 terminal		RCA connectors × 5 • Component video (Pr, Pb, Y) inputs (625p, 525p, 1125i) and Audio L/R inputs are available. • 525p and 625p are progressive scanning signals. Some DVD players can output these signals. • 1125i is one of the new high-definition signals. However, 1125i broadcast is currently not available in Europe	
AUDIO OUT terminal		RCA connectors × 2 • Audio L/R outputs are available.	
Headphone jack		Stereo mini-jack (3.5 mm in diameter)	
Dimensions (W × H × D)		833 mm × 638 mm × 260 mm 833 mm × 569 mm × 97 mm (TV only)	
Weight		22 kg 19.2 kg (TV only)	
Accessories		Remote control unit × 1 (RM-C1808) AA/R6 dry cell battery × 2	

## Design and specifications subject to change without notice.

Pictures displayed on the screen using this TV's ZOOM functions should not be shown for any commercial or demonstration purpose in public places (cafes, hotels, etc.) without the consent of the owners of copyright of the original picture sources, as this constitutes an infringement of copyright.

Item	Model	LT-26C31BUE/LT-26C31SUE	LT-26C31BJE/LT-26C31SJE
Broadcasting systems		CCIR B/G, I, D/K, L	
Colour systems		PAL, SECAM • The EXT terminals also support the NTSC 3.58/4.43 MHz system.	
Channels and frequencies		<ul style="list-style-type: none"> <li>E2-E12, E21-E69, S1-S41, X, Y, Z, Z+1, Z+2, ITALY A-H, ITALY H+1, ITALY H+2, F2-F10, F21-F69, R1-R12, R21-R69, IR A-J</li> <li>French cable TV channel of broadcast frequencies 116 - 172 MHz and 220 - 469 MHz</li> </ul>	
Sound-multiplex systems		A2 (B/G, D/K), NICAM (B/G, I, D/K, L) system	
Teletext systems		FLOF (Fastext), TOP, WST (World Standard System)	
Power requirements		110 - 240 V AC, 50/60 Hz	
Power consumption		148 W, Standby: 2.8 W	
Screen size		Viewable area 66 cm (measured diagonally)	
Display resolution		1280 × 768 (W-XGA)	
Audio output		Rated Power output: 10 W + 10 W	
Speakers		6.6 cm round × 2	
EXT-1 terminal		Euroconnector (21-pin, SCART) • Video input, Audio L/R inputs and RGB inputs are available. • TV broadcast outputs (Video and Audio L/R) are available.	
EXT-2 terminal		Euroconnector (21-pin, SCART) • Video input, S-VIDEO (Y/C) input, Audio L/R inputs and RGB inputs are available. • Video and Audio L/R outputs are available. • T-V LINK functions are available.	
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AUDIO OUT terminal		RCA connectors × 2 • Audio L/R outputs are available.	
Headphone jack		Stereo mini-jack (3.5 mm in diameter)	
Dimensions (W × H × D)		703 mm × 560 mm × 260 mm 703 mm × 491 mm × 94 mm (TV only)	
Weight		19.0 kg 18.3 kg (TV only)	
Accessories		Remote control unit × 1 (RM-C1808) AA/R6 dry cell battery × 2	

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